

**FCC PART 15, SUBPART B and C; FCC 15.249; RSS-210, RSS GEN
TEST REPORT****for****Z-WAVE SIREN****Part Number: ISZW7-ECO**

Prepared for

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DATE: FEBRUARY 11, 2020

	REPORT BODY	APPENDICES					TOTAL
		A	B	C	D	E	
PAGES	19	2	2	2	17	73	115

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GENERAL REPORT SUMMARY

This electromagnetic emission test report is generated by Compatible Electronics Inc., which is an independent testing and consulting firm. The test report is based on testing performed by Compatible Electronics personnel according to the measurement procedures described in the test specifications given below and in the "Test Procedures" section of this report.

The measurement data and conclusions appearing herein relate only to the sample tested and this report may not be reproduced without the written permission of Compatible Electronics, unless done so in full.

The client must not use this report to claim product certification, approval or endorsement by NVLAP, NIST or any agency of the U.S. government.

Device Tested: Z-Wave Siren
Part Number: ISZW7-ECO
S/N: N/A

Product Description: The equipment under test is an alarm sensor.

Modifications: The EUT was not modified to meet the specifications.

Customer: Ecolink Intelligent Technology, Inc.
2055 Corte Del Nogal
Carlsbad, California 92011

Test Dates: February 6-8 and 10-12, 2020

Test Specifications covered by accreditation:

Test Specifications: Emissions requirements
CFR Title 47, Part 15, Subpart B; and Subpart C, Sections 15.205, 15.209, and 15.249;
RSS-210 Issue 9 (2017), and RSS-Gen Issue 5 (2018)



Test Procedures: ANSI C63.4: 2014 and ANSI C63.10: 2013

Test Deviations: The test procedure was not deviated from during the testing.

SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	RESULTS
1	Spurious Radiated RF Emissions, 9 kHz – 9300 MHz (Transmitter, Receiver, and Digital portion)	Complies with the Class B limits of CFR Title 47, Part 15 Subpart B; and the limits of CFR Title 47, Part 15 Subpart C, section 15.205, 15.209 and 15.249; RSS-210 and RSS-Gen Highest reading in relation to spec limit 93.70 dBuV/m (QP) @ 908.42 MHz (*U = 3.19 dB)
2	Conducted RF Emissions 150 kHz – 30 MHz to Class B Limits	The EUT complies with the Class B limits of the CFR Title 47, Part 15 Subpart B.

1. PURPOSE

This document is a qualification test report based on the emissions tests performed on the Z-Wave Siren, Part Number: ISZW7-ECO. The emissions measurements were performed according to the measurement procedure described in ANSI C63.4 and ANSI C63.10. The tests were performed to determine whether the electromagnetic emissions from the equipment under test, referred to as EUT hereafter, are within the Class B specification limits defined by Code of Federal Regulations Title 47, Part 15 Subpart B sections 15.107, 15.109; and Part 15 Subpart C sections 15.205, 15.209 and 15.249; RSS-210 and RSS-Gen.

2. ADMINISTRATIVE DATA

2.1 Location of Testing

The emissions tests described herein were performed at the test facility of Compatible Electronics, 114 Olinda Drive, Brea, California 92823.

2.2 Traceability Statement

The calibration certificates of all test equipment used during the test are on file at the location of the test. The calibration is traceable to the National Institute of Standards and Technology (NIST).

2.3 Cognizant Personnel

Ecolink Intelligent Technology, Inc

Keyoor Gosalia	Program Manager
David Shepard	Engineer
Michael Lim	Firmware Test Engineer

Compatible Electronics Inc.

Harvey Samaco	Test Technician
Kyle Fujimoto	Test Engineer

2.4 Date Test Sample was Received

The test sample was received prior to the date of this report.

2.5 Disposition of the Test Sample

The test sample has not been returned to Ecolink Intelligent Technology, Inc. as of the date of this test report.

2.6 Abbreviations and Acronyms

The following abbreviations and acronyms may be used in this document.

EMI	Electromagnetic Interference
EUT	Equipment Under Test
P/N	Part Number
S/N	Serial Number
ITE	Information Technology Equipment
DoC	Declaration of Conformity
N/A	Not Applicable
Tx	Transmit
Rx	Receive
Inc.	Incorporated
RF	Radio Frequency

3. APPLICABLE DOCUMENTS

The following documents are referenced or used in the preparation of this emission Test Report.

SPEC	TITLE
FCC Title 47, Part 15 Subpart C	FCC Rules – Radio frequency devices (including digital devices) – Intentional Radiators
FCC Title 47, Part 15 Subpart B	FCC Rules – Radio frequency devices (including digital devices) – Unintentional Radiators
RSS-210 Issue 9: 2017	License-exempt Radio Apparatus: Category I Equipment
RSS Gen Issue 5: 2018	General Requirements for Compliance of Radio Apparatus
ANSI C63.4: 2014	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz
ANSI C63.10: 2013	American National Standard of procedure for compliance testing of unlicensed wireless devices

4. DESCRIPTION OF TEST CONFIGURATION

4.1 Description of Test Configuration – Emissions

The Z-Wave Siren, Part Number: ISZW7-ECO (EUT) is a standalone device. During the testing, the EUT was continuously transmitting or receiving.

The EUT was tested with an SD card that actively played an audible alarm that continuously loops for a period of 45 minutes.

The EUT is equipped with a non-user serviceable lithium-ion battery backup that can keep the device active up to 24 hours. It operated in the battery mode when it was disconnected from the AC mains.

The EUT was tested for emissions at the low, middle, and high channels while in the X, Y and Z axis. The X orientation is when the EUT is parallel to the ground. The Y orientation is when the EUT is perpendicular to the ground mounted vertically. The Z orientation is when the EUT is perpendicular to the ground mounted horizontally.

The final radiated emissions data for the EUT was taken in the configuration described above. Please see Appendix E for the data sheets.

4.1.1 Cable Construction and Termination

The EUT had no external cables.

5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT**5.1 EUT and Accessory List**

EQUIPMENT	MANUFACTURER	MODEL NUMBER	PART NUMBER	FCC ID
Z-WAVE SIREN (EUT)	ECOLINK INTELLIGENT TECHNOLOGY, INC.	N/A	ISZW7-ECO	XQC-ISZW7ECO IC: 9863B-ISZW7ECO

5.2 Emissions Test Equipment

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CAL. DATE	CAL. CYCLE
RF RADIATED AND CONDUCTED EMISSIONS TEST EQUIPMENT					
TDK TestLab	TDK RF Solutions, Inc.	9.22	700145	N/A	N/A
EMI Receiver, 20 Hz – 26.5 GHz	Keysight Technologies	N9038A	MY51210150	August 23, 2019	1 Year
System Controller	Sunol Sciences Corporation	SC110V	112213-1	N/A	N/A
Turntable	Sunol Sciences Corporation	2011VS	N/A	N/A	N/A
Antenna-Mast	Sunol Sciences Corporation	TWR95-4	112213-3	N/A	N/A
Loop Antenna	Com-Power	AL-130R	121090	February 5, 2019	2 Year
CombiLog Antenna	Com-Power	AC-220	61093	June 5, 2019	2 Year
Horn Antenna	Com-Power	AH-118	071302	February 22, 2018	2 Year
Preamplifier	Com-Power	PA-118	181653	February 5, 2020	1 Year
Computer	Hewlett Packard	p6716f	MXX1030PX0	N/A	N/A
LCD Monitor	Hewlett Packard	52031a	3CQ046N3MG	N/A	N/A
LISN (EUT)	Com-Power	LI-215A	191951	August 7, 2019	1 Year
Attenuator 10 dB	SureCall	SC-ATT-10	17100025	October 28, 2019	1 Year

6. TEST SITE DESCRIPTION

6.1 Test Facility Description

Please refer to section 2.1 of this report for emissions test location.

6.2 EUT Mounting, Bonding and Grounding

For frequencies 1 GHz and below: The EUT was mounted on a 1.0 by 1.5 meter non-conductive table 0.8 meters above the ground plane.

For frequencies above 1 GHz: The EUT was mounted on a 1.0 by 1.5 meter non-conductive table 1.5 meters above the ground plane.

The EUT was not grounded.

6.3 Measurement Uncertainty

The uncertainty values are in the table below.

The uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level, using a coverage factor of $k=2$

MEASUREMENT TYPE	PARTICULAR CONFIGURATION	UNCERTAINTY VALUES
RADIATED EMISSIONS	3-METER CHAMBER, COMBILOG ANTENNA	3.27 dB (Vertical) 3.19 dB (Horizontal)
RADIATED EMISSIONS	3-METER CHAMBER, HORN ANTENNA	3.63 dB (Both Vertical and Horizontal)
AC LINE CONDUCTED EMISSIONS	3-METER CHAMBER, COM-POWER LISN	2.72 dB

7. TEST PROCEDURES

The following sections describe the test methods and the specifications for the tests. Test results are also included in this section.

7.1 RF Emissions

7.1.1 Conducted Emissions Test

The EMI Receiver was used as a measuring meter. A quasi-peak and/or average reading was taken only where indicated in the data sheets. A 10 dB attenuator was used for the protection of the EMI Receiver input stage, and the offset was adjusted accordingly to read the actual data measured. The LISN output was measured using the EMI Receiver. The output of the second LISN was terminated by a 50-ohm termination. The effective measurement bandwidth used for this test was 9 kHz.

Please see section 6.2 of this report for mounting, bonding, and grounding of the EUT. The EUT was powered through the LISN, which was bonded to the ground plane. The LISN power was filtered and the filter was bonded to the ground plane. The EUT was set up with the minimum distances from any conductive surfaces as specified in ANSI 63:4. The excess power cord was wrapped in a figure eight pattern to form a bundle not exceeding 0.4 meters in length.

The conducted emissions from the EUT were maximized for operating mode as well as cable placement. The final data was collected under program control by computer software. The final qualification data is located in Appendix E.

The six highest emissions are listed in Table 1.

Test Results:

The EUT complies with the **Class B** limits of **CFR** Title 47, Part 15, Subpart B; and the limits of **CFR** Title 47, Part 15, Subpart C sections 15.207 for conducted emissions.

7.1.2 Radiated Emissions Test

The EMI Receiver was used as the measuring meter. Preamplifiers were used to increase the sensitivity of the instrument. The EMI Receiver was initially used with the Analyzer mode feature activated. In this mode, the EMI receiver can then record the actual frequency to be measured. This final reading is then taken accurately in the EMI Receiver mode, which takes into account the cable loss, amplifier gain and antenna factors, so that a true reading is compared to the true limit. The effective measurement bandwidth used for the radiated emissions test was according to the frequency measured.

The frequencies below 1 GHz were quasi-peaked using the quasi-peak detector of the EMI Receiver.

All other frequencies above 1 GHz were averaged using the average detector of the EMI Receiver.

The EMI test chamber of Compatible Electronics, Inc. was used for radiated emissions testing. This test site is in full compliance with ANSI C63.4. Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The turntable supporting the EUT is remote controlled using a motor. The turntable permits EUT rotation of 360 degrees in order to maximize emissions. Also, the antenna mast allows height variation of the antenna from 1 meter to 4 meters. Data was collected in the worst case (highest emission) configuration of the EUT. At each reading, the EUT was rotated 360 degrees and the antenna height was varied from 1 to 4 meters (for E field radiated field strength).

The EUT was tested at a 3-meter test distance. The six highest emissions are listed in Tables 2 and 3.

The measurement bandwidths and transducers used for the radiated emissions test were:

FREQUENCY RANGE	EFFECTIVE MEASUREMENT BANDWIDTH	TRANSDUCER
9 kHz to 150 kHz	200 Hz	Loop Antenna
150 kHz to 30 MHz	9 kHz	Loop Antenna
30 MHz to 1 GHz	120 kHz	CombiLog Antenna
1 GHz to 9.3 GHz	1 MHz	Horn Antenna

Test Results:

The EUT complies with the **Class B** limits of **CFR** Title 47, Part 15, Subpart B; and the limits of CFR Title 47, Part 15, Subpart C sections 15.205, 15.209 and 15.249 for radiated emissions.

7.1.3 RF Emissions Test Results

Table 1
CONDUCTED EMISSION RESULTS
Z-Wave Siren, Part Number: ISZW7-ECO

Frequency MHz	Average Emission Level* dBuV	Average Specification Limit dBuV	Delta (Emission – Spec limit) dB
0.414 (WL)	42.61	47.36	-4.75
1.002 (BL)	39.19	46.00	-6.81
0.998 (WL)	39.18	46.00	-6.82
0.998 (BL)	38.44	46.00	-7.56
0.422 (WL)	39.74	47.30	-7.56
1.666 (BL)	37.17	46.00	-8.83

Table 2
RADIATED EMISSION RESULTS
Z-Wave Siren, Part Number: ISZW7-ECO
AC mode

Frequency MHz	Quasi-Peak Corrected Reading* dBuV/m	Specification Limit dBuV/m	Delta (Cor. Reading – Spec. Limit) dB
908.42 (H)	93.70	93.97	-0.27
915.90 (H)	45.11	46.00	-0.89
908.42 (V)	92.97	93.97	-1.00
916.00 (V)	44.93	46.00	-1.07
916.10 (H)	44.91	46.00	-1.09
908.42 (V)	91.94	93.97	-2.04

Table 3 **RADIATED EMISSION RESULTS**
Z-Wave Siren, Part Number: ISZW7-ECO
Battery mode

Frequency MHz	Quasi-Peak Corrected Reading* dBuV/m	Specification Limit dBuV/m	Delta (Cor. Reading – Spec. Limit) dB
908.42 (H)	93.07	93.97	-0.90
908.42 (V)	92.89	93.97	-1.08
916.00 (H)	92.16	93.97	-1.81
908.42 (V)	91.34	93.97	-2.64
916.00 (V)	91.22	93.97	-2.75
908.42 (H)	90.72	93.97	-3.25

Notes:

- * The complete emissions data is given in Appendix E of this report.
- (BL) Black Lead
- (WL) White Lead
- (V) Vertical
- (H) Horizontal

7.1.4 Sample Calculations

A correction factor for the antenna, cable and a distance factor (if any) must be applied to the meter reading before a true field strength reading can be obtained. This Corrected Meter Reading is then compared to the specification limit in order to determine compliance with the limits.

The equation can be derived in the following manner:

Specification limit ($\mu\text{V/m}$) $\log \times 20$ = Specification Limit in dBuV

(Specification distance / test distance) $\log \times 40$ = distance factor

Note: When using an Active Antenna, the Antenna factor shall be subtracted due to the combination of the internal amplification and antenna loss. At lower frequencies the cable loss is negligible.

OR

Corrected Meter Reading = meter reading + F – A + C

where: F = antenna factor
A = amplifier gain
C = cable loss

The correction factors for the antenna and the amplifier gain are attached in Appendix D of this report. The data sheets are attached in Appendix E.

The distance factor D is 0 when the test is performed at the required specification distance.

7.1.5 99% Bandwidth

The 99% Bandwidth was measured using an EMI Receiver and was taken after maximizing the worst case fundamental emission for both channels per section 7.1.

The following steps were performed for measuring the 99% bandwidth per RSS-GEN, Issue 5, clause 6.7.

1. Set RBW to 1% to 5% of the actual occupied bandwidth.
2. Set VBW to greater than 3 times the RBW.
3. Set the EMI Receiver to the Occupied Bandwidth Function set at 99%
4. Set the peak detector to max hold.
5. Set the sweep time to auto
6. Allow the trace to stabilize.

Please note that this was only used to determine the emission bandwidth and that there are no limits or pass/fail criteria for this test. Please see the data sheets located in Appendix E.

8. CONCLUSIONS

The Z-Wave Siren, Part Number: ISZW7-ECO (EUT), as tested, meets all of the specification limits defined in the RSS-210, RSS-Gen, **Class B** specification limits defined in FCC Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.209 and 15.249.





APPENDIX A

LABORATORY ACCREDITATIONS AND RECOGNITIONS

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Newbury Park Division
1050 Lawrence Drive
Newbury Park, CA 91320
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LABORATORY ACCREDITATIONS AND RECOGNITIONS

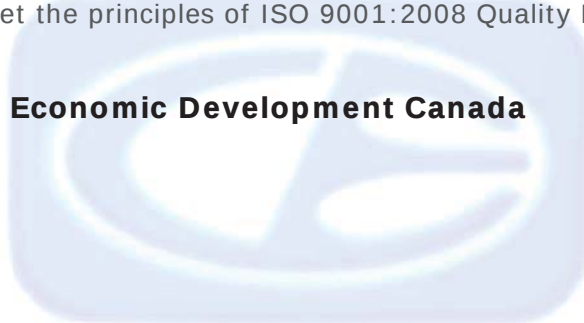


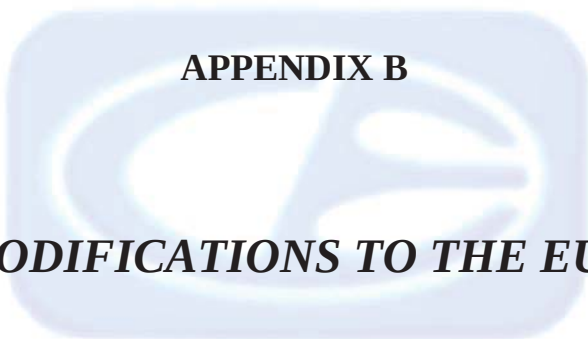
For US, Canada, Australia/New Zealand, Japan, Taiwan, Korea, and the European Union, Compatible Electronics is currently accredited by NVLAP to ISO/IEC 17025. **For the most up-to-date version of our scopes and certificates please visit <http://celectronics.com/quality/scope/>**

Quote from ISO-ILAC-IAF Communiqué on 17025:

"A laboratory's fulfilment of the requirements of ISO/IEC 17025:2005 means the laboratory meets both the technical competence requirements and management system requirements that are necessary for it to consistently deliver technically valid test results and calibrations. The management system requirements in ISO/IEC 17025:2005 (Section 4) are written in language relevant to laboratory operations and meet the principles of ISO 9001:2008 Quality Management Systems — Requirements."

**Innovation, Science and Economic Development Canada
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APPENDIX B

MODIFICATIONS TO THE EUT

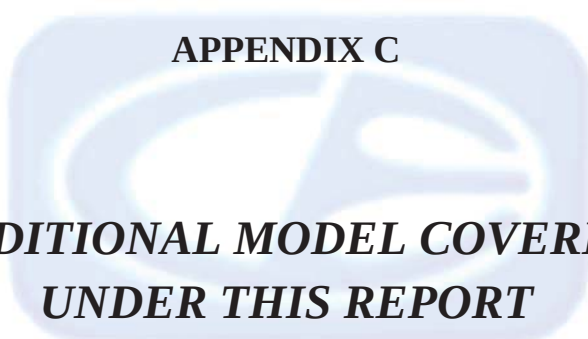
MODIFICATIONS TO THE EUT

The modifications listed below were made to the EUT to pass FCC Subpart B and FCC 15.249 specifications.

All the rework described below was implemented during the test in a method that could be reproduced in all the units by the manufacturer.

No modifications were made to the EUT during the testing.





APPENDIX C

ADDITIONAL MODEL COVERED UNDER THIS REPORT

ADDITIONAL MODEL COVERED UNDER THIS REPORT

USED FOR THE PRIMARY TEST

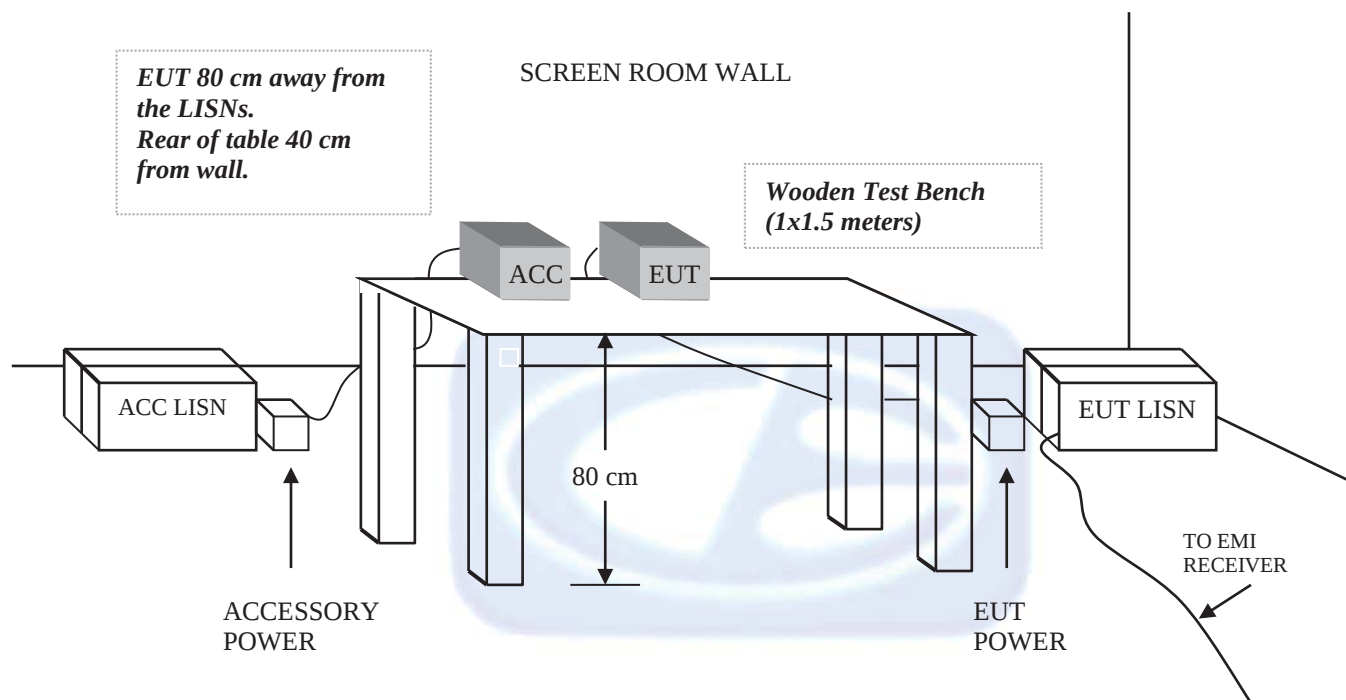
Z-Wave Siren
Part Number: ISZW7-ECO
S/N: N/A

There are no additional models covered under this report.

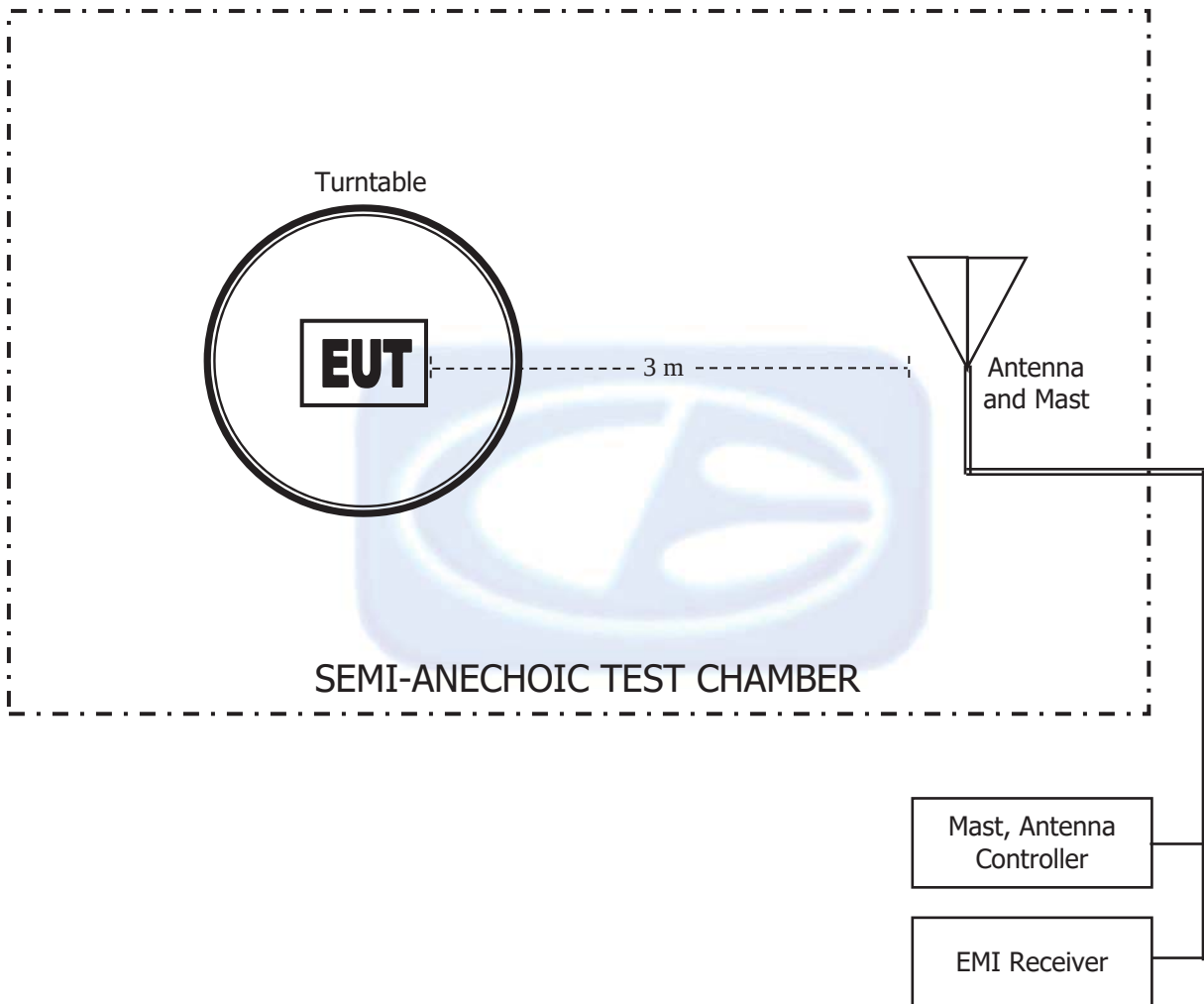


APPENDIX D***DIAGRAMS AND CHARTS***

FIGURE 1: CONDUCTED EMISSIONS TEST SETUP



**FIGURE 2: LAYOUT OF THE SEMI -ANECHOIC
TEST CHAMBER**



COM-POWER AL-130R**LOOP ANTENNA****S/N: 121090****CALIBRATION DATE: FEBRUARY 5, 2019**

FREQUENCY (MHz)	MAGNETIC (dB/m)	ELECTRIC (dB/m)
0.01	15.6	-35.9
0.02	14.8	-36.7
0.03	15.6	-35.9
0.04	15.1	-36.4
0.05	14.4	-37.0
0.06	14.6	-36.9
0.07	14.4	-37.1
0.08	14.3	-37.1
0.09	14.5	-36.9
0.10	14.1	-37.3
0.20	14.1	-37.3
0.30	14.0	-37.4
0.40	14.0	-37.4
0.50	14.2	-37.2
0.60	14.2	-37.2
0.70	14.2	-37.2
0.80	14.2	-37.3
0.90	14.3	-37.2
1.00	14.5	-37.0
2.00	14.5	-36.9
3.00	14.5	-36.9
4.00	14.7	-36.8
5.00	14.6	-36.9
6.00	14.6	-36.9
7.00	14.6	-36.9
8.00	14.6	-36.9
9.00	14.6	-36.9
10.00	14.8	-36.6
11.00	14.9	-36.6
12.00	14.8	-36.6
13.00	14.8	-36.7
14.00	14.6	-36.8
15.00	14.5	-36.9
16.00	14.5	-37.0
17.00	14.6	-36.9
18.00	14.7	-36.7
19.00	14.8	-36.6
20.00	14.9	-36.6
21.00	14.6	-36.8
22.00	14.2	-37.2
23.00	13.7	-37.7
24.00	13.3	-38.2
25.00	13.0	-38.5
26.00	12.9	-38.6
27.00	13.0	-38.5
28.00	13.1	-38.4
29.00	13.1	-38.4
30.00	12.9	-38.5

COM-POWER AC-220**COMBILOG ANTENNA****S/N: 61093****CALIBRATION DATE: JUNE 5, 2019**

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	22.10	200	15.30
35	20.90	250	16.80
40	20.10	300	19.00
45	19.40	350	19.60
50	18.40	400	21.70
60	15.10	450	21.60
70	12.00	500	22.20
80	11.60	550	22.70
90	13.50	600	24.20
100	14.70	650	24.40
120	15.90	700	24.50
125	15.90	750	25.40
140	14.80	800	26.30
150	15.50	850	26.70
160	19.80	900	27.50
175	15.20	950	27.80
180	14.90	1000	27.90

COM POWER AH-118**HORN ANTENNA****S/N: 071302****CALIBRATION DATE: FEBRUARY 22, 2018**

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	23.87	10.0	38.74
1.5	25.54	10.5	39.65
2.0	28.81	11.0	38.53
2.5	28.16	11.5	39.28
3.0	29.32	12.0	40.28
3.5	30.05	12.5	41.69
4.0	30.79	13.0	41.61
4.5	32.15	13.5	41.71
5.0	34.04	14.0	40.75
5.5	33.79	14.5	41.40
6.0	34.50	15.0	42.87
6.5	35.42	15.5	41.05
7.0	37.20	16.0	40.43
7.5	37.21	16.5	40.17
8.0	37.70	17.0	42.63
8.5	37.68	17.5	43.83
9.0	38.45	18.0	46.38
9.5	39.44		

COM-POWER PA-118**PREAMPLIFIER****S/N: 181653****CALIBRATION DATE: FEBRUARY 5, 2020**

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	40.10	6.0	40.60
1.1	40.10	6.5	39.50
1.2	40.00	7.0	39.40
1.3	39.70	7.5	39.30
1.4	39.60	8.0	39.20
1.5	39.90	8.5	40.50
1.6	40.00	9.0	39.60
1.7	39.70	9.5	39.50
1.8	39.50	10.0	38.80
1.9	39.60	11.0	38.70
2.0	39.90	12.0	42.20
2.5	40.10	13.0	40.00
3.0	40.80	14.0	40.30
3.5	40.60	15.0	40.20
4.0	40.50	16.0	41.00
4.5	41.60	17.0	39.70
5.0	39.20	18.0	40.90
5.5	40.00		



FRONT VIEW

ECOLINK INTELLIGENT TECHNOLOGY, INC.

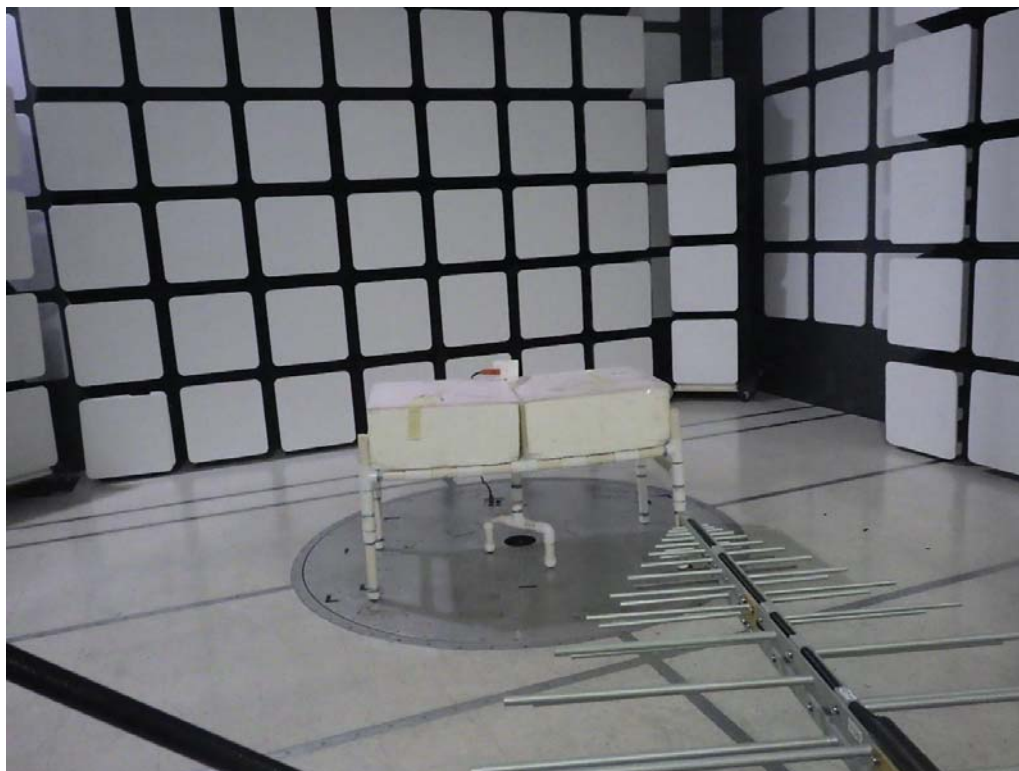
Z-WAVE SIREN

PART NUMBER: ISZW7-ECO

AC MODE

FCC SUBPART B AND C – RADIATED EMISSIONS – BELOW 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



REAR VIEW

ECOLINK INTELLIGENT TECHNOLOGY, INC.

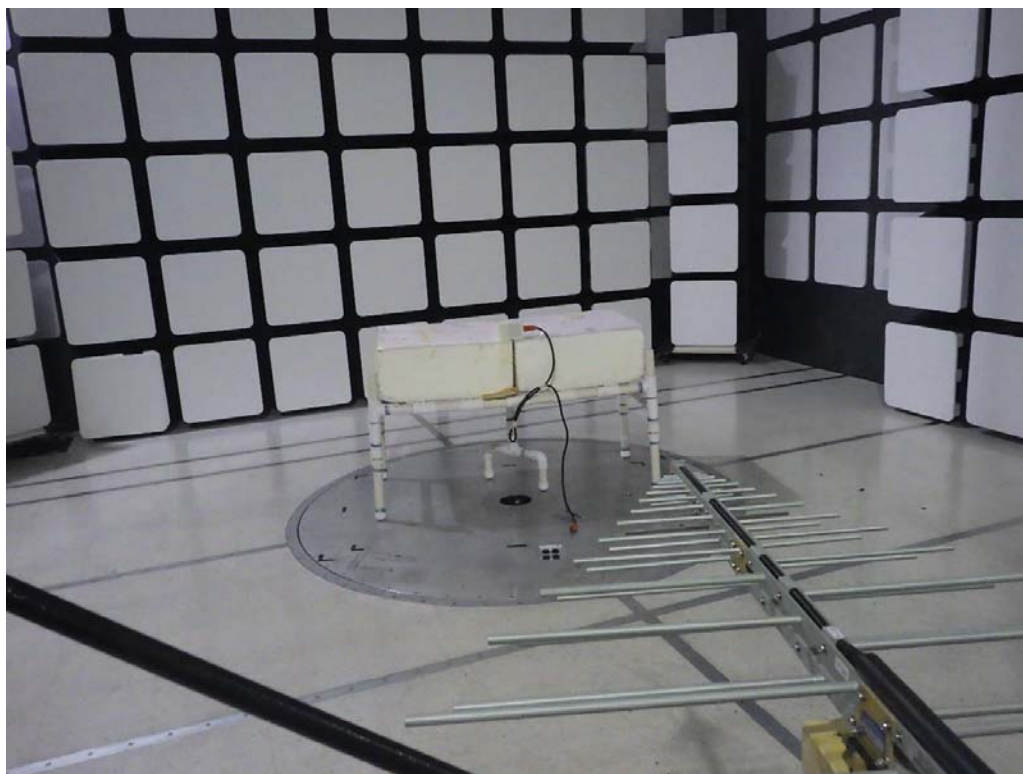
Z-WAVE SIREN

PART NUMBER: ISZW7-ECO

AC MODE

FCC SUBPART B AND C – RADIATED EMISSIONS – BELOW 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



FRONT VIEW

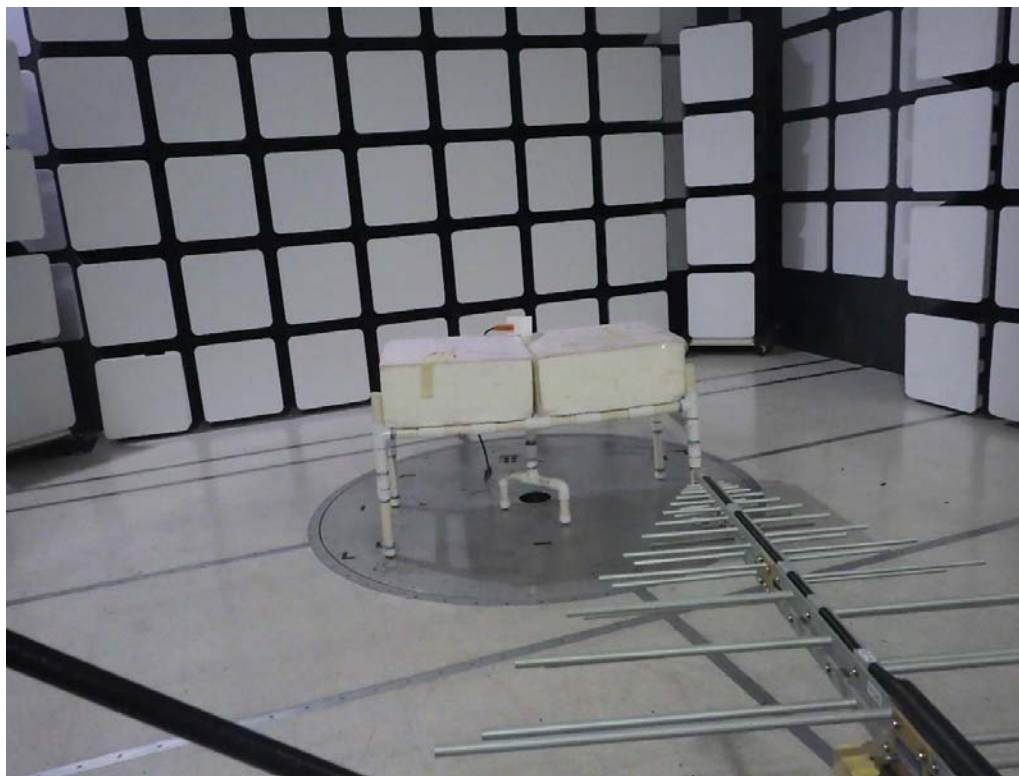
ECOLINK INTELLIGENT TECHNOLOGY, INC.
Z-WAVE SIREN

PART NUMBER: ISZW7-ECO

BATTERY MODE

FCC SUBPART B AND C – RADIATED EMISSIONS – BELOW 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



REAR VIEW

ECOLINK INTELLIGENT TECHNOLOGY, INC.

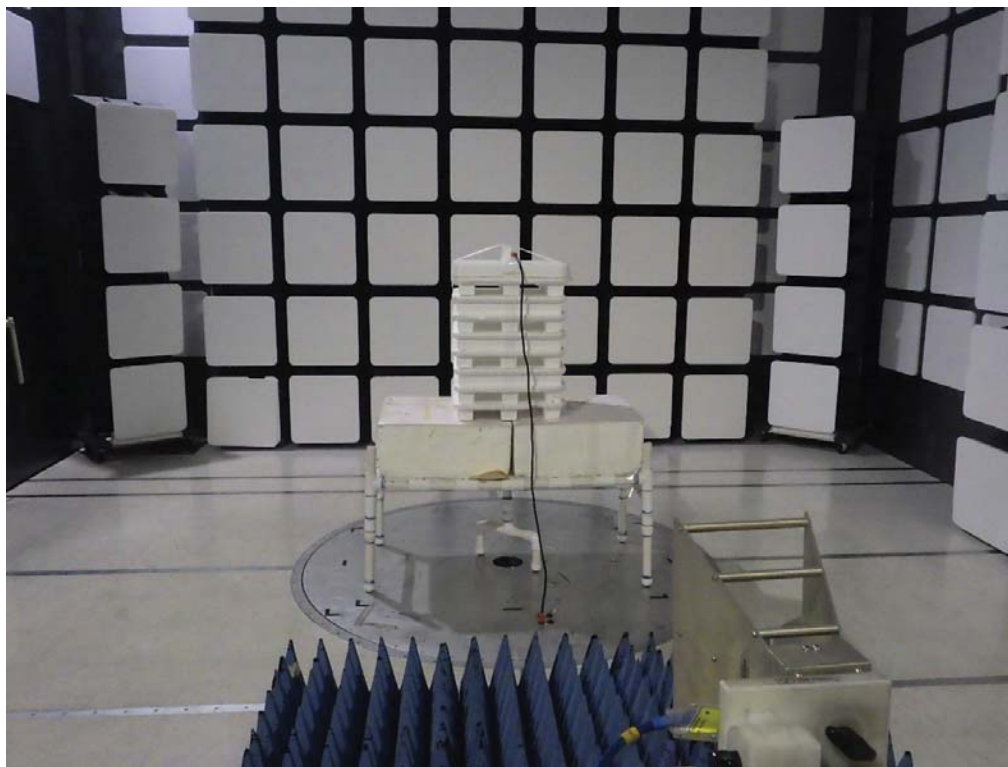
Z-WAVE SIREN

PART NUMBER: ISZW7-ECO

BATTERY MODE

FCC SUBPART B AND C – RADIATED EMISSIONS – BELOW 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

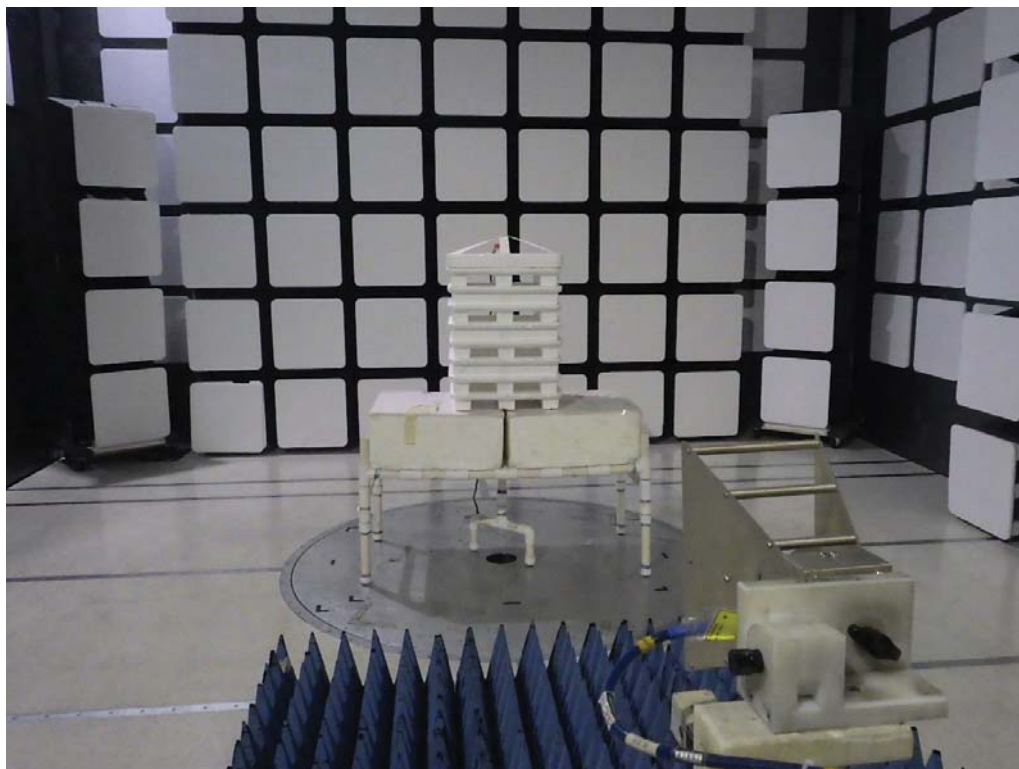


FRONT VIEW

ECOLINK INTELLIGENT TECHNOLOGY, INC.
Z-WAVE SIREN
PART NUMBER: ISZW7-ECO
AC MODE

FCC SUBPART B AND C – RADIATED EMISSIONS – ABOVE 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

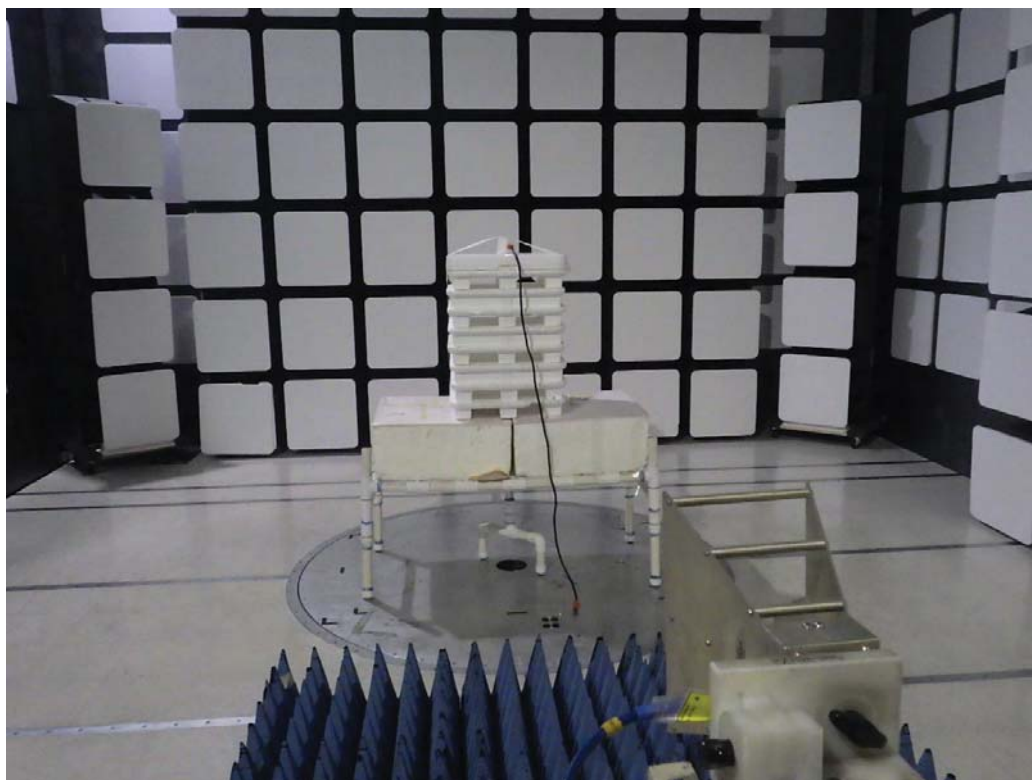


REAR VIEW

ECOLINK INTELLIGENT TECHNOLOGY, INC.
Z-WAVE SIREN
PART NUMBER: ISZW7-ECO
AC MODE

FCC SUBPART B AND C – RADIATED EMISSIONS – ABOVE 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



FRONT VIEW

ECOLINK INTELLIGENT TECHNOLOGY, INC.

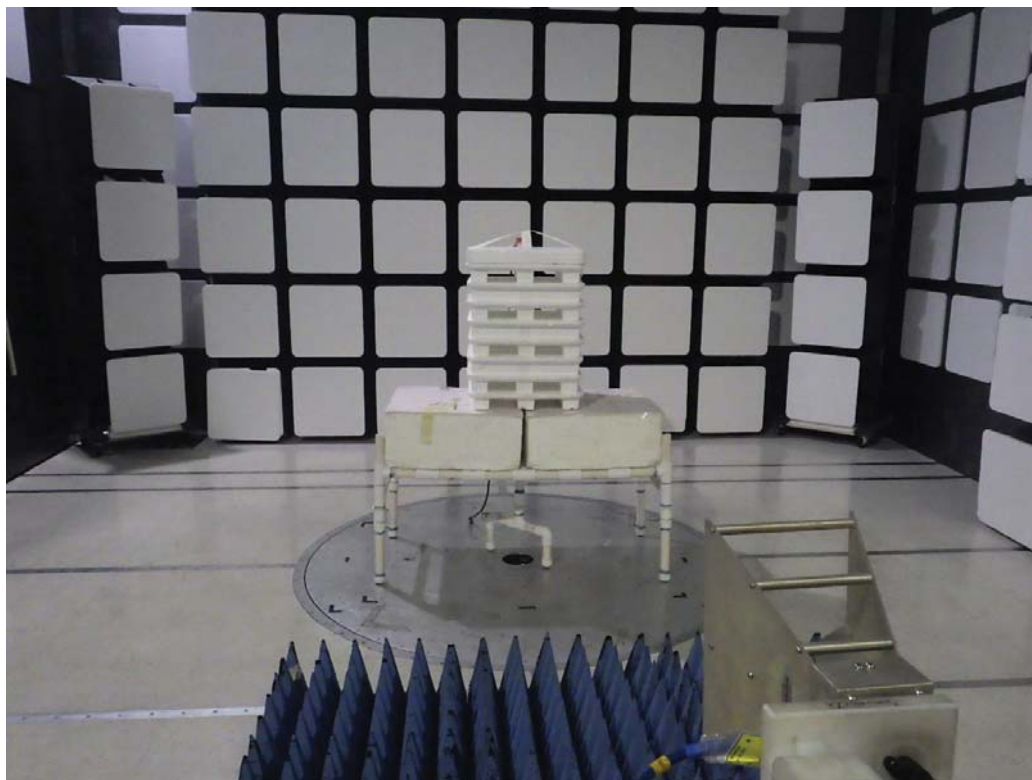
Z-WAVE SIREN

PART NUMBER: ISZW7-ECO

BATTERY MODE

FCC SUBPART B AND C – RADIATED EMISSIONS – ABOVE 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONs**



REAR VIEW

ECOLINK INTELLIGENT TECHNOLOGY, INC.

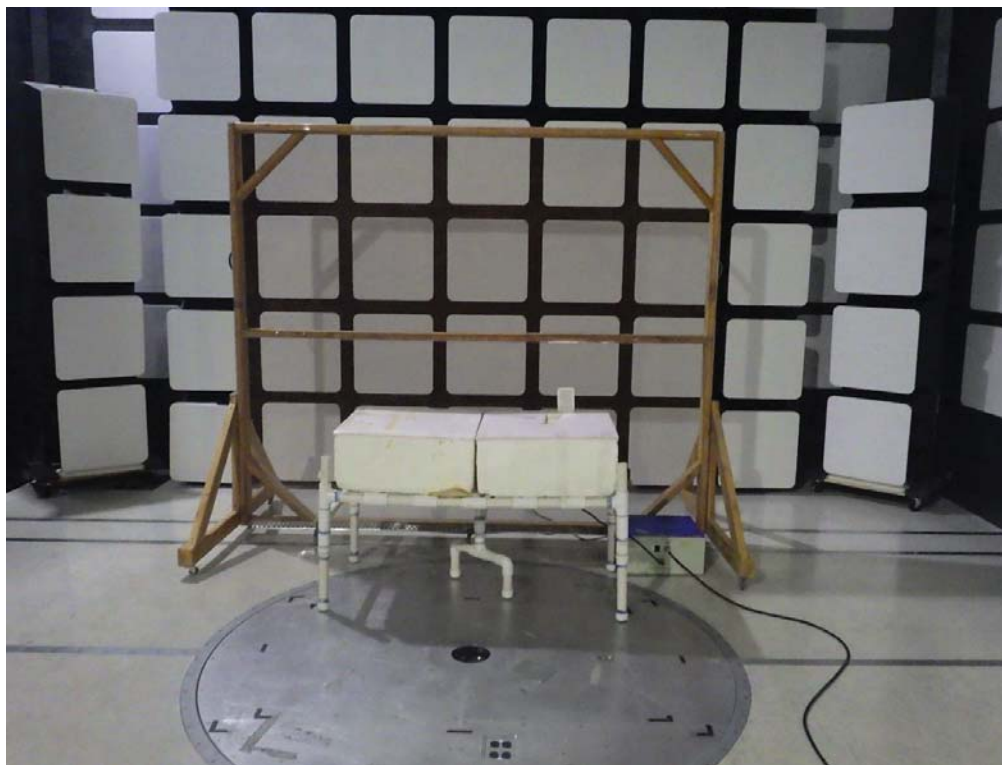
Z-WAVE SIREN

PART NUMBER: ISZW7-ECO

BATTERY MODE

FCC SUBPART B AND C – RADIATED EMISSIONS – ABOVE 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONs**



FRONT VIEW

ECOLINK INTELLIGENT TECHNOLOGY, INC.
Z-WAVE SIREN
PART NUMBER: ISZW7-ECO
AC MODE
FCC SUBPART B AND C – CONDUCTED EMISSIONS

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



REAR VIEW

ECOLINK INTELLIGENT TECHNOLOGY, INC.
Z-WAVE SIREN
PART NUMBER: ISZW7-ECO
AC MODE
FCC SUBPART B AND C – CONDUCTED EMISSIONS

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

APPENDIX E

DATA SHEETS

RADIATED EMISSIONS

DATA SHEETS

Title: Pre-Scan - FCC Class B
File: 1 - Agilent - Pre-Scan - FCC Class B - 30 MHz to 1000 MHz - Low Ch - Z-axis - Alarm active - AC mode.set
Operator: Harvey Samaco
EUT Type: Z-Wave Siren
EUT Condition: The EUT was continuously transmitting at 908.42 MHz
Company: Ecolink Intelligent Technology, Inc.
P/N: ISZW7-ECO
Low Channel, Z-axis (Worst case)
Power level -16
AC mode, Alarm active

2/7/2020 4:46:32 PM
Sequence: Preliminary Scan



No emissions found below 30 MHz

Title: Radiated Final - FCC Class B
File: 1 - Agilent - Final Scan - FCC Class B - 30 MHz to 1000 MHz - Low Ch - Z-axis - Alarm active - AC mode.set
Operator: Harvey Samaco
EUT Type: Z-Wave Siren
EUT Condition: The EUT was continuously transmitting at 908.42 MHz
Company: Ecolink Intelligent Technology, Inc.
P/N: ISZW7-ECO
Low Channel, Z-axis (Worst case)
Power level -16
AC mode, Alarm active

2/7/2020 4:55:25 PM
Sequence: Final Measurements

FCC Class B

Freq (MHz)	Pol	(PEAK) EMI (dBμV/m)	(QP) EMI (dBμV/m)	(PEAK) Margin (dB)	(QP) Margin (dB)	Limit (dBμV/m)	Transducer (dB)	Cable (dB)	Ttbl Aql (deq)	Twr Ht (cm)
64.10	V	26.07	21.34	-13.93	-18.66	40.00	13.61	0.94	249.25	143.22
67.10	V	29.17	25.25	-10.83	-14.75	40.00	12.82	0.97	65.50	111.46
67.80	V	28.18	24.36	-11.82	-15.64	40.00	12.62	0.98	340.00	127.16
830.40	H	38.11	33.40	-7.89	-12.60	46.00	27.00	2.80	277.25	157.55
831.00	H	38.74	33.43	-7.26	-12.57	46.00	27.00	2.80	50.75	158.68
833.10	H	39.73	33.35	-6.27	-12.65	46.00	26.90	2.80	174.75	190.50



Title: Pre-Scan - FCC Class B
File: 1 - Agilent - Pre-Scan - FCC Class B - 30 MHz to 1000 MHz - High Ch - Z-axis - Alarm active - AC mode.set
Operator: Harvey Samaco
EUT Type: Z-Wave Siren
EUT Condition: The EUT was continuously transmitting at 916 MHz
Company: Ecolink Intelligent Technology, Inc.
P/N: ISZW7-ECO
High Channel, Z-axis (Worst case)
Power level -16
Alarm active, AC mode

2/7/2020 9:43:13 AM
Sequence: Preliminary Scan



No emissions found below 30 MHz

Title: Radiated Final - FCC Class B
File: 1 - Agilent - Final Scan - FCC Class B - 30 MHz to 1000 MHz - High Ch - Z-axis - Alarm active - AC mode.set
Operator: Harvey Samaco
EUT Type: Z-Wave Siren
EUT Condition: The EUT was continuously transmitting at 916 MHz
Company: Ecolink Intelligent Technology, Inc.
P/N: ISZW7-ECO
High Channel, Z-axis (worst case)
Power level -16
Alarm active, AC mode

2/7/2020 9:58:38 AM
Sequence: Final Measurements

FCC Class B

Freq (MHz)	Pol	(PEAK) EMI (dBμV/m)	(QP) EMI (dBμV/m)	(PEAK) Margin (dB)	(QP) Margin (dB)	Limit (dBμV/m)	Transducer (dB)	Cable (dB)	Ttbi Agl (deg)	Twr Ht (cm)
41.40	V	34.12	29.54	-5.88	-10.46	40.00	19.88	0.90	233.00	190.92
43.10	V	32.06	27.31	-7.94	-12.69	40.00	19.60	0.90	232.75	159.10
43.30	V	36.04	32.23	-3.96	-7.77	40.00	19.57	0.90	220.50	111.46
43.70	V	37.38	33.52	-2.62	-6.48	40.00	19.49	0.90	224.50	111.34
44.40	V	37.79	33.93	-2.21	-6.07	40.00	19.48	0.90	257.50	111.22
44.70	V	33.26	28.97	-6.74	-11.03	40.00	19.44	0.90	143.00	158.80



Title: Pre-Scan - FCC Class B
File: 1 - Agilent - Pre-Scan - FCC Class B - 30 MHz to 1000 MHz - Receiver Mode - AC mode.set
Operator: Harvey Samaco
EUT Type: Z-Wave Siren
EUT Condition: The EUT was continuously receiving at 916 MHz (Worst case)
Company: Ecolink Intelligent Technology, Inc.
P/N: ISZW7-ECO
Receiver mode, Z-axis (Worst case)
Power level -16
AC mode

2/10/2020 12:00:26 PM
Sequence: Preliminary Scan



No emissions found below 30 MHz

Title: Radiated Final - FCC Class B
File: 1 - Agilent - Final Scan - FCC Class B - 30 MHz to 1000 MHz - Receiver Mode - AC mode.set
Operator: Harvey Samaco
EUT Type: Z-Wave Siren
EUT Condition: The EUT was continuously receiving at 916 MHz (Worst case)
Company: Ecolink Intelligent Technology, Inc.
P/N: ISZW7-ECO
Receiver Mode, Z-axis (Worst Case)
Power level -16
AC mode

2/10/2020 12:09:32 PM
Sequence: Final Measurements

FCC Class B

Freq (MHz)	Pol	(PEAK) EMI (dBµV/m)	(QP) EMI (dBµV/m)	(PEAK) Margin (dB)	(QP) Margin (dB)	Limit (dBµV/m)	Transducer (dB)	Cable (dB)	TtBl Aql (deg)	Twr Ht (cm)
910.60	H	38.64	33.46	-7.36	-12.54	46.00	27.90	2.48	44.50	397.97
911.80	H	38.76	33.49	-7.24	-12.51	46.00	27.90	2.49	186.00	286.20
915.90	H	47.52	45.11	1.52	-0.89	46.00	27.90	2.51	268.25	222.68
916.00	H	47.41	43.78	1.41	-2.22	46.00	27.91	2.51	75.75	317.79
916.00	V	47.20	44.93	1.20	-1.07	46.00	27.90	2.51	289.50	286.02
916.10	H	47.62	44.91	1.62	-1.09	46.00	27.90	2.51	112.75	286.02



Title: Pre-Scan - FCC Class B
File: 1 - Agilent - Pre-Scan - FCC Class B - 30 MHz to 1000 MHz - Low Ch - Z-axis - Alarm active - Battery.set
Operator: Harvey Samaco
EUT Type: Z-Wave Siren
EUT Condition: The EUT was continuously transmitting at 908.42 MHz
Company: Ecolink Intelligent Technology, Inc.
P/N: ISZW7-ECO
Low Channel, Z-axis (Worst case)
Power level -16
Alarm active, Battery mode

2/7/2020 3:07:00 PM
Sequence: Preliminary Scan



Title: Radiated Final - FCC Class B
File: 1 - Agilent - Final Scan - FCC Class B - 30 MHz to 1000 MHz - Low Ch - Z-axis - Alarm active - Battery mode.set
Operator: Harvey Samaco
EUT Type: Z-Wave Siren
EUT Condition: The EUT was continuously transmitting at 908.42 MHz
Company: Ecolink Intelligent Technology, Inc.
P/N: ISZW7-ECO
Low Channel, Z-axis (Worst case)
Power level -16
Alarm active, Battery mode

2/7/2020 3:23:41 PM
Sequence: Final Measurements

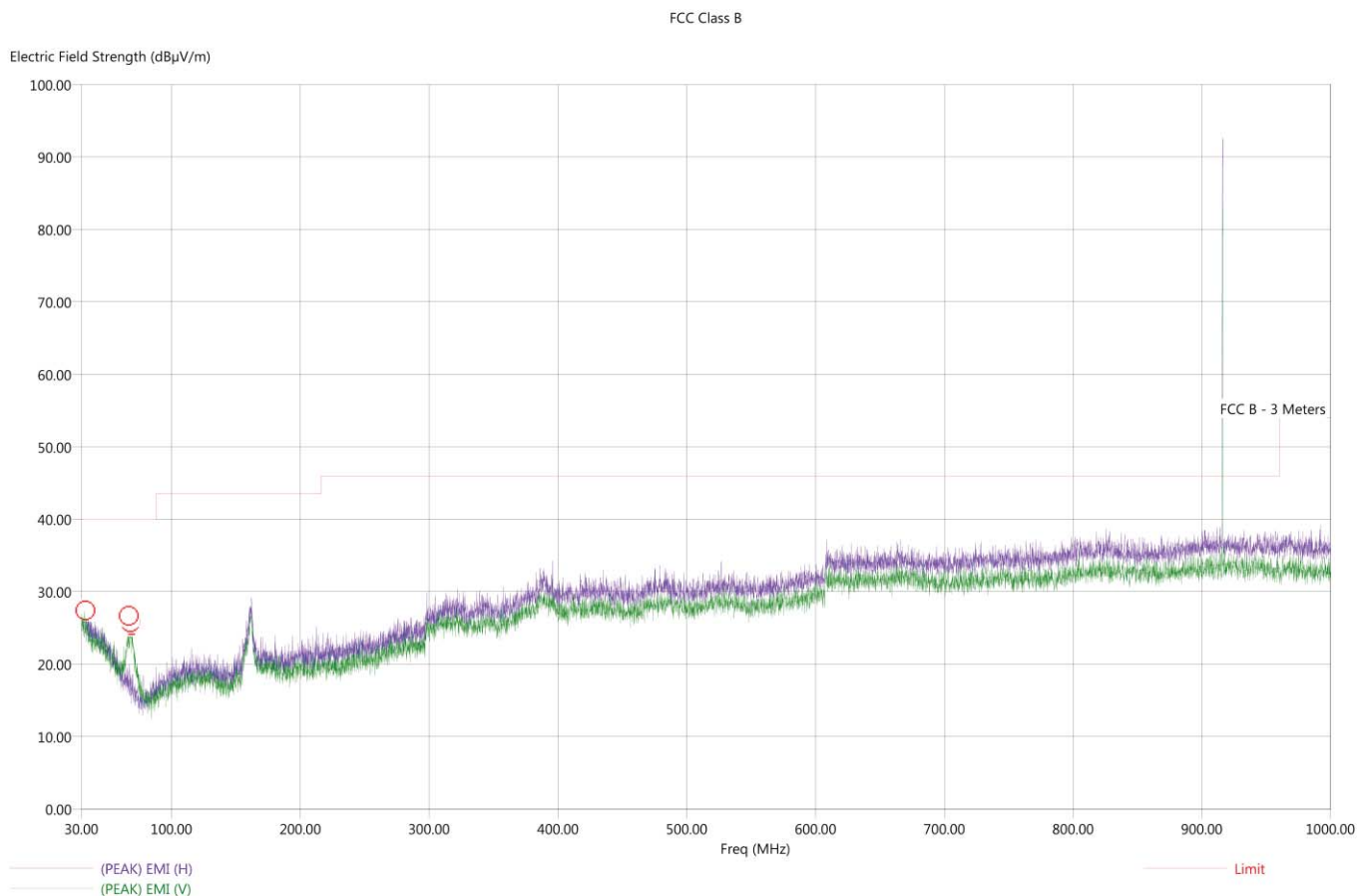
FCC Class B

Freq (MHz)	Pol	(PEAK) EMI (dBµV/m)	(QP) EMI (dBµV/m)	(PEAK) Margin (dB)	(QP) Margin (dB)	Limit (dBµV/m)	Transducer (dB)	Cable (dB)	Ttbl Aql (deg)	Twr Ht (cm)
64.30	V	27.17	23.14	-12.83	-16.86	40.00	13.68	0.94	52.75	144.41
65.00	V	28.52	23.60	-11.48	-16.40	40.00	13.38	0.95	88.75	111.16
65.40	V	28.37	22.82	-11.63	-17.18	40.00	13.28	0.96	136.50	110.92
65.80	V	29.59	25.15	-10.41	-14.85	40.00	13.10	0.96	63.75	111.10
66.20	V	28.28	25.00	-11.72	-15.00	40.00	13.11	0.96	53.00	111.22
66.90	V	29.02	24.06	-10.98	-15.94	40.00	12.83	0.97	93.00	158.98



Title: Pre-Scan - FCC Class B
File: 1 - Agilent - Pre-Scan - FCC Class B - 30 MHz to 1000 MHz - High Ch - Z-axis - Alarm active - Battery.set
Operator: Harvey Samaco
EUT Type: Z-Wave Siren
EUT Condition: The EUT was continuously transmitting at 916 MHz
Company: Ecolink Intelligent Technology, Inc.
P/N: ISZW7-ECO
High Channel, Z-axis (Worst case)
Power level -16
Alarm active, Battery mode

2/7/2020 10:24:36 AM
Sequence: Preliminary Scan



Title: Radiated Final - FCC Class B
File: 1 - Agilent - Final Scan - FCC Class B - 30 MHz to 1000 MHz - High Ch - Z-axis - Alarm active - Battery mode.set
Operator: Harvey Samaco
EUT Type: Z-Wave Siren
EUT Condition: The EUT was continuously transmitting at 916 MHz
Company: Ecolink Intelligent Technology, Inc.
P/N: ISZW7-ECO
High Channel, Z-axis (Worst case)
Power level -16
Alarm active, Battery mode

2/7/2020 10:35:39 AM
Sequence: Final Measurements

FCC Class B

Freq (MHz)	Pol	(PEAK) EMI (dBµV/m)	(QP) EMI (dBµV/m)	(PEAK) Margin (dB)	(QP) Margin (dB)	Limit (dBµV/m)	Transducer (dB)	Cable (dB)	Ttbl Aql (deq)	Twr Ht (cm)
33.00	H	29.62	24.37	-10.38	-15.63	40.00	21.34	0.84	286.25	206.98
33.30	H	30.58	23.93	-9.42	-16.07	40.00	21.33	0.84	36.75	254.56
66.60	V	28.37	23.66	-11.63	-16.34	40.00	12.96	0.97	90.75	142.62
67.80	V	29.09	24.90	-10.91	-15.10	40.00	12.53	0.98	70.25	111.22
68.50	V	27.78	24.61	-12.22	-15.39	40.00	12.36	0.99	360.00	111.28
68.80	V	28.40	23.88	-11.60	-16.12	40.00	12.20	0.99	24.50	158.92



Title: Pre-Scan - FCC Class B
File: 1 - Agilent - Pre-Scan - FCC Class B - 30 MHz to 1000 MHz - Receiver Mode - Battery mode.set
Operator: Harvey Samaco
EUT Type: Z-Wave Siren
EUT Condition: The EUT was continuously receiving at 916 MHz (Worst case)
Company: Ecolink Intelligent Technology, Inc.
P/N: ISZW7-ECO
Receiver Mode, Z-axis (Worst Case)
Power level -16
Battery mode

2/10/2020 1:22:06 PM
Sequence: Preliminary Scan



Title: Radiated Final - FCC Class B
File: 1 - Agilent - Final Scan - FCC Class B - 30 MHz to 1000 MHz - Receiver Mode - Battery mode.set
Operator: Harvey Samaco
EUT Type: Z-Wave Siren
EUT Condition: The EUT was continuously receiving at 916 MHz (Worst case)
Company: Ecolink Intelligent Technology, Inc.
P/N: ISZW7-ECO
Receiver Mode, Z-axis (Worst Case)
Power level -16
Battery mode

2/10/2020 1:31:15 PM
Sequence: Final Measurements

FCC Class B

Freq (MHz)	Pol	(PEAK) EMI (dBµV/m)	(QP) EMI (dBµV/m)	(PEAK) Margin (dB)	(QP) Margin (dB)	Limit (dBµV/m)	Transducer (dB)	Cable (dB)	Ttbl Aql (deq)	Twr Ht (cm)
830.30	H	37.84	32.85	-8.16	-13.15	46.00	27.00	2.30	124.00	238.32
830.50	H	38.57	32.83	-7.43	-13.17	46.00	27.00	2.30	63.50	401.25
830.60	H	38.03	32.82	-7.97	-13.18	46.00	27.00	2.30	208.00	176.17
832.10	V	37.84	33.60	-8.16	-12.40	46.00	26.90	2.30	179.00	397.37
832.20	V	38.36	32.71	-7.64	-13.29	46.00	26.90	2.30	137.50	222.38
833.50	V	38.50	32.62	-7.50	-13.38	46.00	26.82	2.30	65.25	206.38





FCC 15.249

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

Fundamental - AC mode

Low Channel

Power level -16

[illegible]

FCC 15.249

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

Harmonics - Low Channel - AC mode
Transmit Mode - X-Axis
Power level -16

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
1816.84	47.77	V	73.97	-26.20	Peak	0.00	153.13	
1816.84	46.12	V	53.97	-7.85	Avg	0.00	153.13	
2725.26	39.80	V	73.97	-34.17	Peak	0.00	160.65	
2725.26	34.24	V	53.97	-19.73	Avg	0.00	160.65	
3633.68								No emissions
3633.68								detected
4542.10								No emissions
4542.10								detected
5450.52	42.89	V	73.97	-31.08	Peak	255.00	138.50	
5450.52	32.71	V	53.97	-21.26	Avg	255.00	138.50	
6358.94								No emissions
6358.94								detected
7267.36								No emissions
7267.36								detected
8175.78								No emissions
8175.78								detected
9084.20								No emissions
9084.20								detected

FCC 15.249

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

Harmonics - Low Channel - AC mode
Transmit Mode - Y-Axis
Power level -16

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
1816.84	49.85	V	73.97	-24.12	Peak	0.00	151.10	
1816.84	48.32	V	53.97	-5.65	Avg	0.00	151.10	
2725.26	39.91	V	73.97	-34.06	Peak	149.00	100.00	
2725.26	33.87	V	53.97	-20.10	Avg	149.00	100.00	
3633.68								No emissions
3633.68								detected
4542.10								No emissions
4542.10								detected
5450.52	43.24	V	73.97	-30.73	Peak	0.00	124.29	
5450.52	34.62	V	53.97	-19.35	Avg	0.00	124.29	
6358.94								No emissions
6358.94								detected
7267.36								No emissions
7267.36								detected
8175.78								No emissions
8175.78								detected
9084.20								No emissions
9084.20								detected

FCC 15.249

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

Harmonics - Low Channel - AC mode**Transmit Mode - Z-Axis****Power level -16**

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
1816.84	41.90	V	73.97	-32.07	Peak	48.50	141.31	
1816.84	38.09	V	53.97	-15.88	Avg	48.50	141.31	
2725.26	37.10	V	73.97	-36.87	Peak	168.75	100.00	
2725.26	27.91	V	53.97	-26.06	Avg	168.75	100.00	
3633.68								No emissions
3633.68								detected
4542.10								No emissions
4542.10								detected
5450.52	42.57	V	73.97	-31.40	Peak	155.50	149.07	
5450.52	32.54	V	53.97	-21.43	Avg	155.50	149.07	
6358.94								No emissions
6358.94								detected
7267.36								No emissions
7267.36								detected
8175.78								No emissions
8175.78								detected
9084.20								No emissions
9084.20								detected

FCC 15.249

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

Harmonics - Low Channel - AC mode**Transmit Mode - X-Axis****Power level -16**

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
1816.84	46.72	H	73.97	-27.25	Peak	225.50	168.05	
1816.84	44.96	H	53.97	-9.01	Avg	225.50	168.05	
2725.26	39.66	H	73.97	-34.32	Peak	326.75	234.68	
2725.26	34.06	H	53.97	-19.91	Avg	326.75	234.68	
3633.68								No emissions
3633.68								detected
4542.10								No emissions
4542.10								detected
5450.52								No emissions
5450.52								detected
6358.94								No emissions
6358.94								detected
7267.36								No emissions
7267.36								detected
8175.78								No emissions
8175.78								detected
9084.20								No emissions
9084.20								detected

FCC 15.249

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

Harmonics - Low Channel - AC mode**Transmit Mode - Y-Axis****Power level -16**

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
1816.84	40.75	H	73.97	-33.22	Peak	207.25	191.52	
1816.84	37.50	H	53.97	-16.47	Avg	207.25	191.52	
2725.26	38.80	H	73.97	-35.17	Peak	188.25	163.52	
2725.26	30.59	H	53.97	-23.38	Avg	188.25	163.52	
3633.68								No emissions
3633.68								detected
4542.10								No emissions
4542.10								detected
5450.52	43.16	H	73.97	-30.81	Peak	17.25	193.31	
5450.52	35.26	H	53.97	-18.71	Avg	17.25	193.31	
6358.94								No emissions
6358.94								detected
7267.36								No emissions
7267.36								detected
8175.78								No emissions
8175.78								detected
9084.20								No emissions
9084.20								detected

FCC 15.249

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

Harmonics - Low Channel - AC mode**Transmit Mode - Z-Axis****Power level -16**

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
1816.84	48.54	H	73.97	-25.43	Peak	140.00	168.41	
1816.84	46.96	H	53.97	-7.01	Avg	140.00	168.41	
2725.26	44.01	H	73.97	-29.96	Peak	297.00	171.76	
2725.26	40.38	H	53.97	-13.59	Avg	297.00	171.76	
3633.68								No emissions
3633.68								detected
4542.10								No emissions
4542.10								detected
5450.52	42.98	H	73.97	-30.99	Peak	59.00	100.00	
5450.52	33.72	H	53.97	-20.25	Avg	59.00	100.00	
6358.94								No emissions
6358.94								detected
7267.36								No emissions
7267.36								detected
8175.78								No emissions
8175.78								detected
9084.20								No emissions
9084.20								detected

FCC 15.249

Ecolink Intelligent Technology, Inc.
Z-Wave Siren
Part Number: ISZW7-ECO

Date: 2/6/2020
Lab: D
Tested By: Harvey Samaco

Fundamental - AC mode

High Channel

Power Level -16

[illegible]

FCC 15.249

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

Harmonics - High Channel - AC mode
Transmit Mode - X-Axis
Power level -16

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
1832.00	45.15	V	73.97	-28.83	Peak	0.00	152.89	
1832.00	43.10	V	53.97	-10.87	Avg	0.00	152.89	
2748.00	38.58	V	73.97	-35.39	Peak	0.00	221.31	
2748.00	29.18	V	53.97	-24.79	Avg	0.00	221.31	
3664.00								No emissions
3664.00								detected
4580.00								No emissions
4580.00								detected
5496.00	42.01	V	73.97	-31.96	Peak	293.75	100.00	
5496.00	31.17	V	53.97	-22.80	Avg	293.75	100.00	
6412.00								No emissions
6412.00								detected
7328.00								No emissions
7328.00								detected
8244.00								No emissions
8244.00								detected
9160.00								No emissions
9160.00								detected

FCC 15.249

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

Harmonics - High Channel - AC mode
Transmit Mode - Y-Axis
Power level -16

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
1832.00	49.19	V	73.97	-24.78	Peak	321.25	146.74	
1832.00	47.76	V	53.97	-6.21	Avg	321.25	146.74	
2748.00	41.18	V	73.97	-32.79	Peak	152.75	143.64	
2748.00	35.53	V	53.97	-18.44	Avg	152.75	143.64	
3664.00	37.68	V	73.97	-36.29	Peak	336.50	157.61	
3664.00	27.20	V	53.97	-26.77	Avg	336.50	157.61	
4580.00								No emissions detected
4580.00								
5496.00	43.23	V	73.97	-30.74	Peak	0.00	116.17	
5496.00	34.50	V	53.97	-19.47	Avg	0.00	116.17	
6412.00								No emissions detected
6412.00								
7328.00								No emissions detected
7328.00								
8244.00								No emissions detected
8244.00								
9160.00								No emissions detected
9160.00								

FCC 15.249

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

Harmonics - High Channel - AC mode**Transmit Mode - Z-Axis****Power level -16**

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
1832.00	42.57	V	73.97	-31.40	Peak	282.50	100.00	
1832.00	39.45	V	53.97	-14.52	Avg	282.50	100.00	
2748.00	36.49	V	73.97	-37.48	Peak	204.75	100.00	
2748.00	26.39	V	53.97	-27.58	Avg	204.75	100.00	
3664.00								No emissions
3664.00								detected
4580.00								No emissions
4580.00								detected
5496.00	41.96	V	73.97	-32.01	Peak	154.75	100.00	
5496.00	31.65	V	53.97	-22.32	Avg	154.75	100.00	
6412.00								No emissions
6412.00								detected
7328.00								No emissions
7328.00								detected
8244.00								No emissions
8244.00								detected
9160.00								No emissions
9160.00								detected

**FCC 15.249**

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

Harmonics - High Channel - AC mode**Transmit Mode - X-Axis****Power level -16**

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
1832.00	45.41	H	73.97	-28.56	Peak	229.25	164.24	
1832.00	43.19	H	53.97	-10.78	Avg	229.25	164.24	
2748.00	38.57	H	73.97	-35.40	Peak	47.25	167.28	
2748.00	30.53	H	53.97	-23.44	Avg	47.25	167.28	
3664.00								No emissions
3664.00								detected
4580.00								No emissions
4580.00								detected
5496.00	41.53	H	73.97	-32.44	Peak	45.00	100.00	
5496.00	29.80	H	53.97	-24.17	Avg	45.00	100.00	
6412.00								No emissions
6412.00								detected
7328.00								No emissions
7328.00								detected
8244.00								No emissions
8244.00								detected
9160.00								No emissions
9160.00								detected

FCC 15.249

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

Harmonics - High Channel - AC mode
Transmit Mode - Y-Axis
Power level -16

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
1832.00	41.59	H	73.97	-32.39	Peak	149.00	212.65	
1832.00	38.89	H	53.97	-15.08	Avg	149.00	212.65	
2748.00	38.06	H	73.97	-35.91	Peak	172.00	100.00	
2748.00	27.67	H	53.97	-26.30	Avg	172.00	100.00	
3664.00	37.82	H	73.97	-36.16	Peak	350.00	197.43	
3664.00	26.32	H	53.97	-27.65	Avg	350.00	197.43	
4580.00								No emissions
4580.00								detected
5496.00	42.89	H	73.97	-31.09	Peak	14.50	181.01	
5496.00	34.29	H	53.97	-19.68	Avg	14.50	181.01	
6412.00								No emissions
6412.00								detected
7328.00								No emissions
7328.00								detected
8244.00								No emissions
8244.00								detected
9160.00								No emissions
9160.00								detected

FCC 15.249

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

Harmonics - High Channel - AC mode
Transmit Mode - Z-Axis
Power level -16

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
1832.00	51.40	H	73.97	-22.58	Peak	159.50	173.61	
1832.00	50.27	H	53.97	-3.71	Avg	159.50	173.61	
2748.00	43.64	H	73.97	-30.34	Peak	301.75	168.59	
2748.00	40.53	H	53.97	-13.44	Avg	301.75	168.59	
3664.00	38.34	H	73.97	-35.63	Peak	171.75	100.00	
3664.00	25.64	H	53.97	-28.34	Avg	171.75	100.00	
4580.00								No emissions
4580.00								detected
5496.00	43.59	H	73.97	-30.38	Peak	55.25	118.92	
5496.00	34.65	H	53.97	-19.32	Avg	55.25	118.92	
6412.00								No emissions
6412.00								detected
7328.00								No emissions
7328.00								detected
8244.00								No emissions
8244.00								detected
9160.00								No emissions
9160.00								detected

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Ecolink Intelligent Technology, Inc.
Z-Wave Siren
Part Number: ISZW7-ECO

Date: 2/6/2020
Lab: D
Tested By: Harvey Samaco

Non Harmonic Emissions from the Tx and Digital Portion - 9 kHz to 30 MHz - AC mode

Non Harmonic Emissions from the Tx and Digital Portion - 1 GHz to 9.3 GHz - AC mode

Power level -16

[illegible]

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Ecolink Intelligent Technology, Inc.
Z-Wave Siren
Part Number: ISZW7-ECO

Date: 2/6/2020
Lab: D
Tested By: Harvey Samaco

Receive Mode - 1 GHz to 9.3 GHz - AC mode

Power level -16

[illegible]

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Ecolink Intelligent Technology, Inc.
Z-Wave Siren
Part Number: ISZW7-ECO

Date: 2/6/2020
Lab: D
Tested By: Harvey Samaco

Fundamental - Battery mode

Low Channel

Power Level -16

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
908.42	91.67	V	93.97	-2.30	Peak	0.00	126.02	X-Axis
908.42	91.34	V	93.97	-2.64	QP	0.00	126.02	Vertical Polarization
908.42	93.41	V	93.97	-0.56	Peak	19.25	124.89	Y-Axis
908.42	92.89	V	93.97	-1.08	QP	19.25	124.89	Vertical Polarization
908.42	89.54	V	93.97	-4.44	Peak	21.25	120.05	Z-Axis
908.42	89.11	V	93.97	-4.86	QP	21.25	120.05	Vertical Polarization
908.42	91.23	H	93.97	-2.74	Peak	109.00	100.00	X-Axis
908.42	90.72	H	93.97	-3.25	QP	109.00	100.00	Horizontal Polarization
908.42	87.47	H	93.97	-6.50	Peak	80.75	100.00	Y-Axis
908.42	86.83	H	93.97	-7.14	QP	80.75	100.00	Horizontal Polarization
908.42	93.48	H	93.97	-0.49	Peak	182.25	100.00	Z-Axis
908.42	93.07	H	93.97	-0.90	QP	182.25	100.00	Horizontal Polarization

**FCC 15.249**

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

Harmonics - Low Channel - Battery mode**Transmit Mode - X-Axis****Power level -16**

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
1816.84	43.90	V	73.97	-30.07	Peak	328.50	208.11	
1816.84	41.62	V	53.97	-12.35	Avg	328.50	208.11	
2725.26	39.56	V	73.97	-34.41	Peak	0.00	218.08	
2725.26	33.30	V	53.97	-20.67	Avg	0.00	218.08	
3633.68								No emissions
3633.68								detected
4542.10								No emissions
4542.10								detected
5450.52	42.63	V	73.97	-31.35	Peak	259.00	139.52	
5450.52	33.05	V	53.97	-20.92	Avg	259.00	139.52	
6358.94								No emissions
6358.94								detected
7267.36								No emissions
7267.36								detected
8175.78								No emissions
8175.78								detected
9084.20								No emissions
9084.20								detected

FCC 15.249

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

Harmonics - Low Channel - Battery mode
Transmit Mode - Y-Axis
Power level -16

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
1816.84	49.87	V	73.97	-24.10	Peak	23.50	100.00	
1816.84	48.51	V	53.97	-5.46	Avg	23.50	100.00	
2725.26	40.17	V	73.97	-33.80	Peak	135.75	153.73	
2725.26	36.04	V	53.97	-17.93	Avg	135.75	153.73	
3633.68								No emissions
3633.68								detected
4542.10								No emissions
4542.10								detected
5450.52	43.02	V	73.97	-30.95	Peak	0.00	117.13	
5450.52	34.33	V	53.97	-19.64	Avg	0.00	117.13	
6358.94								No emissions
6358.94								detected
7267.36								No emissions
7267.36								detected
8175.78								No emissions
8175.78								detected
9084.20								No emissions
9084.20								detected

**FCC 15.249**

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

Harmonics - Low Channel - Battery mode**Transmit Mode - Z-Axis****Power level -16**

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
1816.84	44.07	V	73.97	-29.90	Peak	114.75	100.00	
1816.84	40.91	V	53.97	-13.06	Avg	114.75	100.00	
2725.26	37.69	V	73.97	-36.28	Peak	245.75	100.00	
2725.26	29.38	V	53.97	-24.59	Avg	245.75	100.00	
3633.68								No emissions
3633.68								detected
4542.10								No emissions
4542.10								detected
5450.52	42.19	V	73.97	-31.78	Peak	157.75	178.80	
5450.52	32.27	V	53.97	-21.70	Avg	157.75	178.80	
6358.94								No emissions
6358.94								detected
7267.36								No emissions
7267.36								detected
8175.78								No emissions
8175.78								detected
9084.20								No emissions
9084.20								detected

**FCC 15.249**

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

Harmonics - Low Channel - Battery mode**Transmit Mode - X-Axis****Power level -16**

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
1816.84	44.51	H	73.97	-29.46	Peak	229.00	166.02	
1816.84	42.61	H	53.97	-11.36	Avg	229.00	166.02	
2725.26	41.53	H	73.97	-32.44	Peak	80.50	124.23	
2725.26	37.51	H	53.97	-16.46	Avg	80.50	124.23	
3633.68								No emissions
3633.68								detected
4542.10								No emissions
4542.10								detected
5450.52	41.57	H	73.97	-32.41	Peak	117.00	129.25	
5450.52	30.99	H	53.97	-22.98	Avg	117.00	129.25	
6358.94								No emissions
6358.94								detected
7267.36								No emissions
7267.36								detected
8175.78								No emissions
8175.78								detected
9084.20								No emissions
9084.20								detected

FCC 15.249

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

Harmonics - Low Channel - Battery mode
Transmit Mode - Y-Axis
Power level -16

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
1816.84	42.46	H	73.97	-31.51	Peak	179.25	130.86	
1816.84	39.66	H	53.97	-14.31	Avg	179.25	130.86	
2725.26	37.99	H	73.97	-35.99	Peak	172.50	165.55	
2725.26	31.39	H	53.97	-22.58	Avg	172.50	165.55	
3633.68								No emissions
3633.68								detected
4542.10								No emissions
4542.10								detected
5450.52	42.65	H	73.97	-31.32	Peak	72.25	155.94	
5450.52	32.97	H	53.97	-21.00	Avg	72.25	155.94	
6358.94								No emissions
6358.94								detected
7267.36								No emissions
7267.36								detected
8175.78								No emissions
8175.78								detected
9084.20								No emissions
9084.20								detected

FCC 15.249

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

Harmonics - Low Channel - Battery mode
Transmit Mode - Z-Axis
Power level -16

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
1816.84	46.66	H	73.97	-27.31	Peak	133.75	164.59	
1816.84	45.05	H	53.97	-8.92	Avg	133.75	164.59	
2725.26	43.42	H	73.97	-30.55	Peak	312.25	120.59	
2725.26	39.96	H	53.97	-14.02	Avg	312.25	120.59	
3633.68								No emissions
3633.68								detected
4542.10								No emissions
4542.10								detected
5450.52	43.12	H	73.97	-30.85	Peak	65.25	145.79	
5450.52	34.37	H	53.97	-19.60	Avg	65.25	145.79	
6358.94								No emissions
6358.94								detected
7267.36								No emissions
7267.36								detected
8175.78								No emissions
8175.78								detected
9084.20								No emissions
9084.20								detected

FCC 15.249

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

Fundamental - Battery mode

High Channel

Power Level -16

[illegible]

FCC 15.249

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

Harmonics - High Channel - Battery mode
Transmit Mode - X-Axis
Power level -16

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
1832.00	42.03	V	73.97	-31.94	Peak	332.25	200.00	
1832.00	39.34	V	53.97	-14.63	Avg	332.25	200.00	
2748.00	36.56	V	73.97	-37.41	Peak	0.00	217.31	
2748.00	26.39	V	53.97	-27.58	Avg	0.00	217.31	
3664.00	37.46	V	73.97	-36.51	Peak	0.00	100.00	
3664.00	25.59	V	53.97	-28.38	Avg	0.00	100.00	
4580.00								No emissions detected
4580.00								
5496.00	43.10	V	73.97	-30.88	Peak	244.00	136.95	
5496.00	33.42	V	53.97	-20.55	Avg	244.00	136.95	
6412.00								No emissions detected
6412.00								
7328.00								No emissions detected
7328.00								
8244.00								No emissions detected
8244.00								
9160.00								No emissions detected
9160.00								

FCC 15.249

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

Harmonics - High Channel - Battery mode
Transmit Mode - Y-Axis
Power level -16

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
1832.00	50.53	V	73.97	-23.45	Peak	327.00	145.19	
1832.00	49.37	V	53.97	-4.60	Avg	327.00	145.19	
2748.00	41.42	V	73.97	-32.55	Peak	125.25	145.61	
2748.00	36.59	V	53.97	-17.38	Avg	125.25	145.61	
3664.00	37.89	V	73.97	-36.08	Peak	339.75	159.22	
3664.00	27.15	V	53.97	-26.82	Avg	339.75	159.22	
4580.00								No emissions detected
4580.00								
5496.00	43.61	V	73.97	-30.36	Peak	0.00	100.00	
5496.00	34.35	V	53.97	-19.62	Avg	0.00	100.00	
6412.00								No emissions detected
6412.00								
7328.00								No emissions detected
7328.00								
8244.00								No emissions detected
8244.00								
9160.00								No emissions detected
9160.00								

FCC 15.249

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

Harmonics - High Channel - Battery mode
Transmit Mode - Z-Axis
Power level -16

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
1832.00	42.19	V	73.97	-31.78	Peak	356.25	100.00	
1832.00	39.43	V	53.97	-14.54	Avg	356.25	100.00	
2748.00	36.99	V	73.97	-36.98	Peak	287.00	142.86	
2748.00	27.36	V	53.97	-26.61	Avg	287.00	142.86	
3664.00								No emissions
3664.00								detected
4580.00								No emissions
4580.00								detected
5496.00	42.39	V	73.97	-31.58	Peak	135.00	104.95	
5496.00	31.18	V	53.97	-22.79	Avg	135.00	104.95	
6412.00								No emissions
6412.00								detected
7328.00								No emissions
7328.00								detected
8244.00								No emissions
8244.00								detected
9160.00								No emissions
9160.00								detected

FCC 15.249

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

Harmonics - High Channel - Battery mode
Transmit Mode - X-Axis
Power level -16

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
1832.00	44.64	H	73.97	-29.33	Peak	236.25	164.95	
1832.00	42.45	H	53.97	-11.52	Avg	236.25	164.95	
2748.00	39.10	H	73.97	-34.87	Peak	57.75	117.43	
2748.00	32.95	H	53.97	-21.03	Avg	57.75	117.43	
3664.00								No emissions
3664.00								detected
4580.00								No emissions
4580.00								detected
5496.00	42.01	H	73.97	-31.96	Peak	159.25	148.29	
5496.00	30.86	H	53.97	-23.11	Avg	159.25	148.29	
6412.00								No emissions
6412.00								detected
7328.00								No emissions
7328.00								detected
8244.00								No emissions
8244.00								detected
9160.00								No emissions
9160.00								detected

**FCC 15.249**

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

Harmonics - High Channel - Battery mode**Transmit Mode - Y-Axis****Power level -16**

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
1832.00	41.99	H	73.97	-31.98	Peak	152.50	158.14	
1832.00	38.48	H	53.97	-15.49	Avg	152.50	158.14	
2748.00	36.68	H	73.97	-37.29	Peak	171.25	222.14	
2748.00	26.02	H	53.97	-27.95	Avg	171.25	222.14	
3664.00	37.31	H	73.97	-36.66	Peak	329.00	152.17	
3664.00	26.17	H	53.97	-27.80	Avg	329.00	152.17	
4580.00								No emissions
4580.00								detected
5496.00	42.47	H	73.97	-31.50	Peak	25.50	164.17	
5496.00	33.68	H	53.97	-20.29	Avg	25.50	164.17	
6412.00								No emissions
6412.00								detected
7328.00								No emissions
7328.00								detected
8244.00								No emissions
8244.00								detected
9160.00								No emissions
9160.00								detected

FCC 15.249

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

Harmonics - High Channel - Battery mode
Transmit Mode - Z-Axis
Power level -16

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
1832.00	51.28	H	73.97	-22.69	Peak	156.50	172.17	
1832.00	50.25	H	53.97	-3.72	Avg	156.50	172.17	
2748.00	41.37	H	73.97	-32.60	Peak	293.25	169.43	
2748.00	36.74	H	53.97	-17.23	Avg	293.25	169.43	
3664.00	37.98	H	73.97	-35.99	Peak	102.75	100.00	
3664.00	26.54	H	53.97	-27.43	Avg	102.75	100.00	
4580.00								No emissions
4580.00								detected
5496.00	42.86	H	73.97	-31.11	Peak	49.25	163.16	
5496.00	33.83	H	53.97	-20.14	Avg	49.25	163.16	
6412.00								No emissions
6412.00								detected
7328.00								No emissions
7328.00								detected
8244.00								No emissions
8244.00								detected
9160.00								No emissions
9160.00								detected

FCC 15.249

Ecolink Intelligent Technology, Inc.
Z-Wave Siren
Part Number: ISZW7-ECO

Date: 2/6/2020
Lab: D
Tested By: Harvey Samaco

Non Harmonic Emissions from the Tx and Digital Portion - 9 kHz to 30 MHz - Battery mode
Non Harmonic Emissions from the Tx and Digital Portion - 1 GHz to 9.3 GHz - Battery mode
Power level -16

[illegible]

FCC 15.249

Ecolink Intelligent Technology, Inc.
Z-Wave Siren
Part Number: ISZW7-ECO

Date: 2/6/2020
Lab: D
Tested By: Harvey Samaco

Receive Mode - 1 GHz to 9.3 GHz - Battery mode

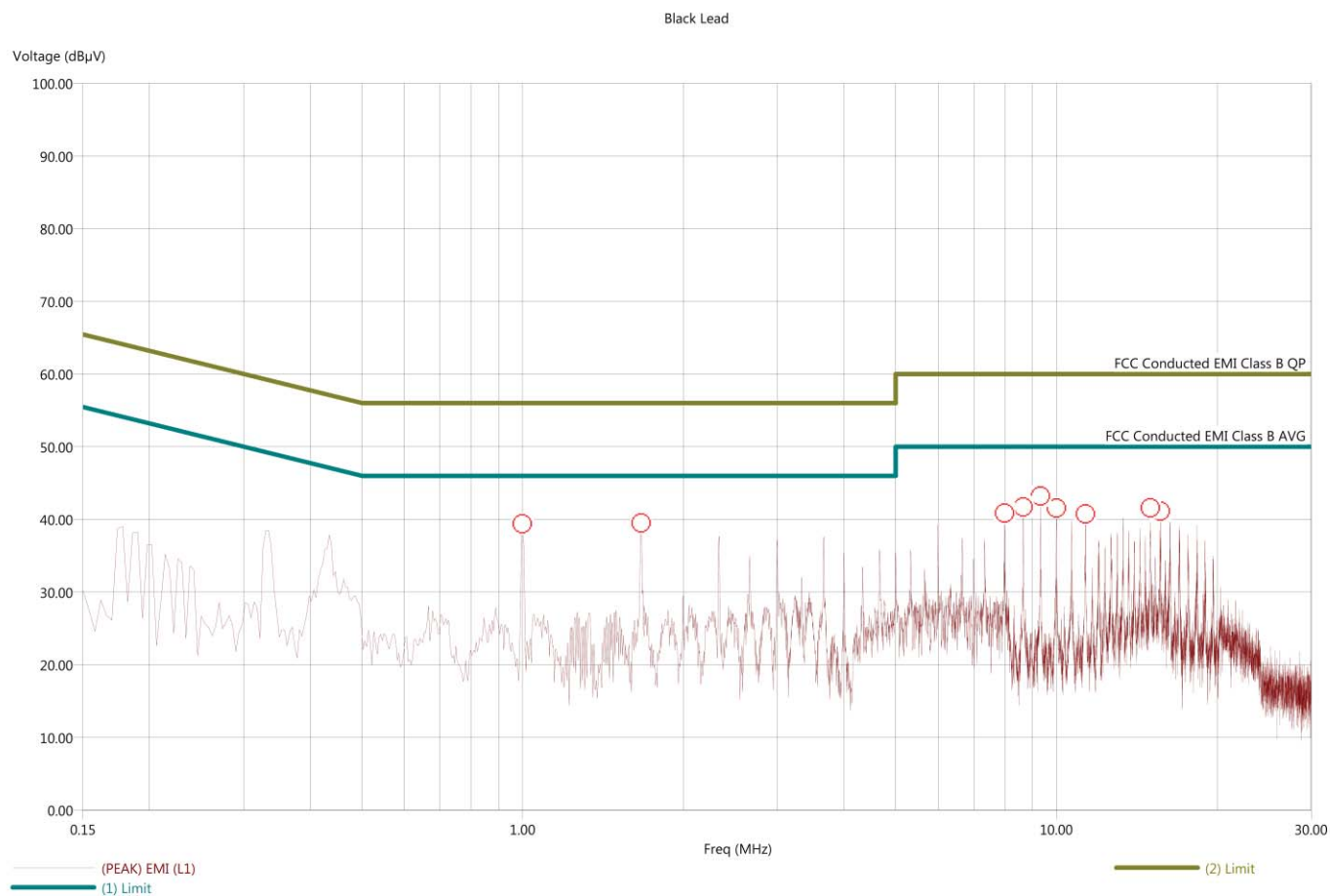
Power level -16

[illegible]

***CONDUCTED EMISSIONS
DATA SHEETS***

Title: FCC Class B - Black Lead
File: Keysight - Pre-Scan - Black Lead - FCC Class B.set
Operator: Harvey Samaco
EUT Type: Z-Wave Siren
EUT Condition: The EUT was set to continuously transmit at 908.42 MHz in the low channel (Worst case)
Company: Ecolink Intelligent Technology, Inc.
P/N: ISZW7-ECO
Power level -16
Alarm active, AC mode

2/11/2020 11:22:08 AM
Sequence: Preliminary Scan



Title: FCC Class B - Black Lead
File: Keysight - Final Scan - Black Lead - FCC Class B.set
Operator: Harvey Samaco
EUT Type: Z-wave Siren
EUT Condition: The EUT was set to continuously transmit at 908.42 MHz in the low channel (Worst case)
Company: Ecolink Intelligent Technology, Inc.
P/N: ISZW7-ECO
Power level -16
Alarm active, AC mode

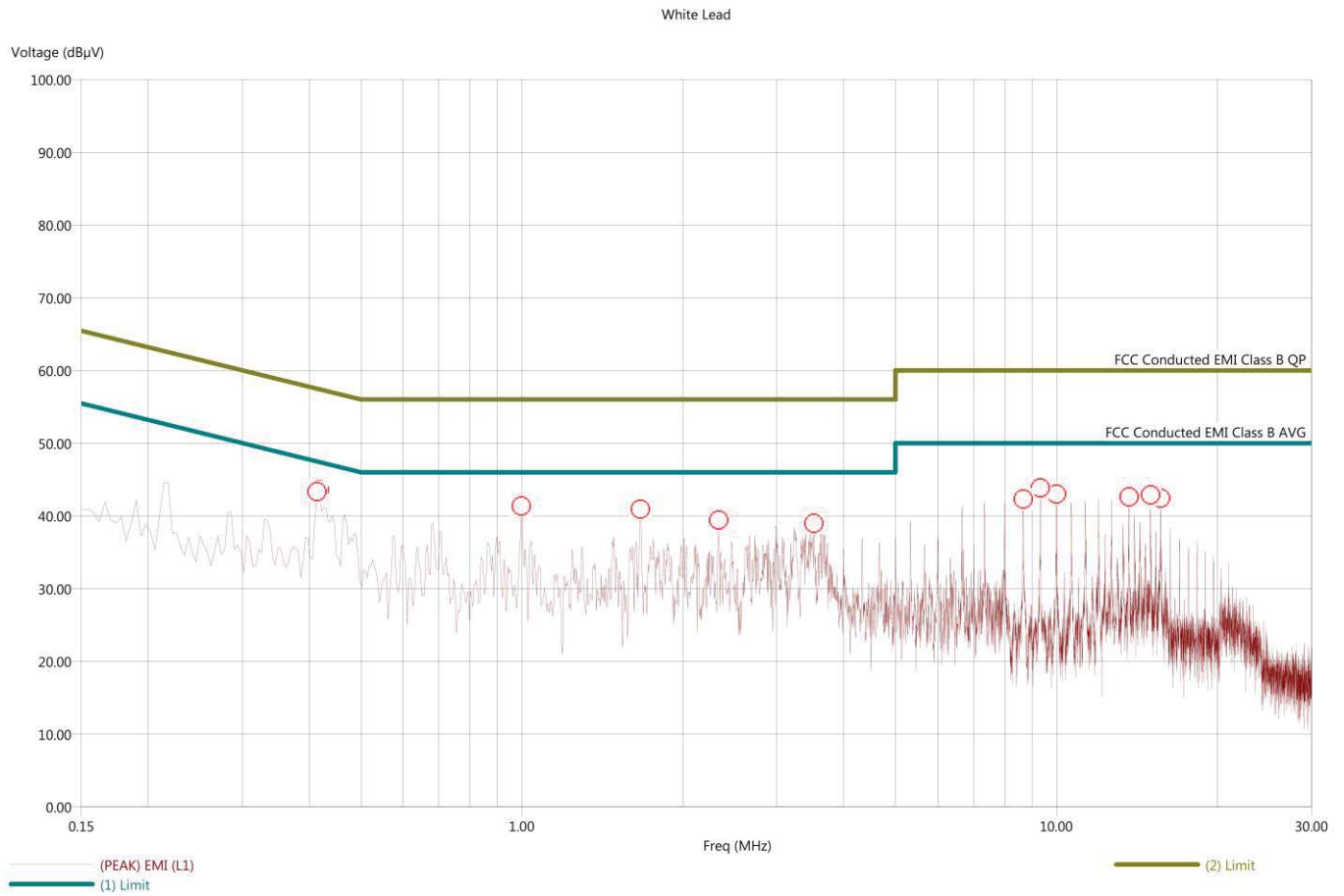
2/11/2020 11:30:37 AM
Sequence: Final Measurements

Black Lead									
Freq (MHz)	(PEAK) EMI (dBµV)	(AVG) EMI (dBµV)	(PEAK) Margin (AVG) (dB)	(RMS) Margin (dB)	(RMS) Limit (dBµV)	Cable (dB)	Transducer (dB)	Filter (dB)	
0.998	41.70	38.44	-14.30	-7.56	46.00	0.04	0.13	10.10	
1.002	41.51	39.19	-14.49	-6.81	46.00	0.04	0.13	10.10	
1.666	42.87	37.17	-13.13	-8.83	46.00	0.07	0.14	10.03	
7.994	42.15	34.10	-17.85	-15.90	50.00	0.17	0.31	10.10	
8.658	43.07	35.16	-16.93	-14.84	50.00	0.18	0.33	10.10	
9.330	44.06	38.75	-15.94	-11.25	50.00	0.18	0.34	10.10	
9.990	44.28	36.85	-15.72	-13.15	50.00	0.19	0.36	10.10	
11.326	43.15	36.13	-16.85	-13.87	50.00	0.20	0.42	10.10	
14.978	38.47	28.86	-21.53	-21.14	50.00	0.23	0.56	10.10	
15.650	44.37	33.13	-15.63	-16.87	50.00	0.24	0.59	10.10	



Title: FCC Class B - White Lead
File: Keysight - Pre-Scan - White Lead - FCC Class B.set
Operator: Harvey Samaco
EUT Type: Z-Wave Siren
EUT Condition: The EUT was set to continuously transmit at 908.42 MHz in the low channel (Worst case)
Company: Ecolink Intelligent Technology, Inc.
P/N: ISZW7-ECO
Power level -16
Alarm active, AC mode

2/11/2020 11:33:05 AM
Sequence: Preliminary Scan



Title: FCC Class B - White Lead
File: Keysight - Final Scan - White Lead - FCC Class B.set
Operator: Harvey Samaco
EUT Type: Z-wave Siren
EUT Condition: The EUT was set to continuously transmit at 908.42 MHz in the low channel (Worst case)
Company: Ecolink Intelligent Technology, Inc.
P/N: ISZW7-ECO
Power level -16
Alarm active, AC mode

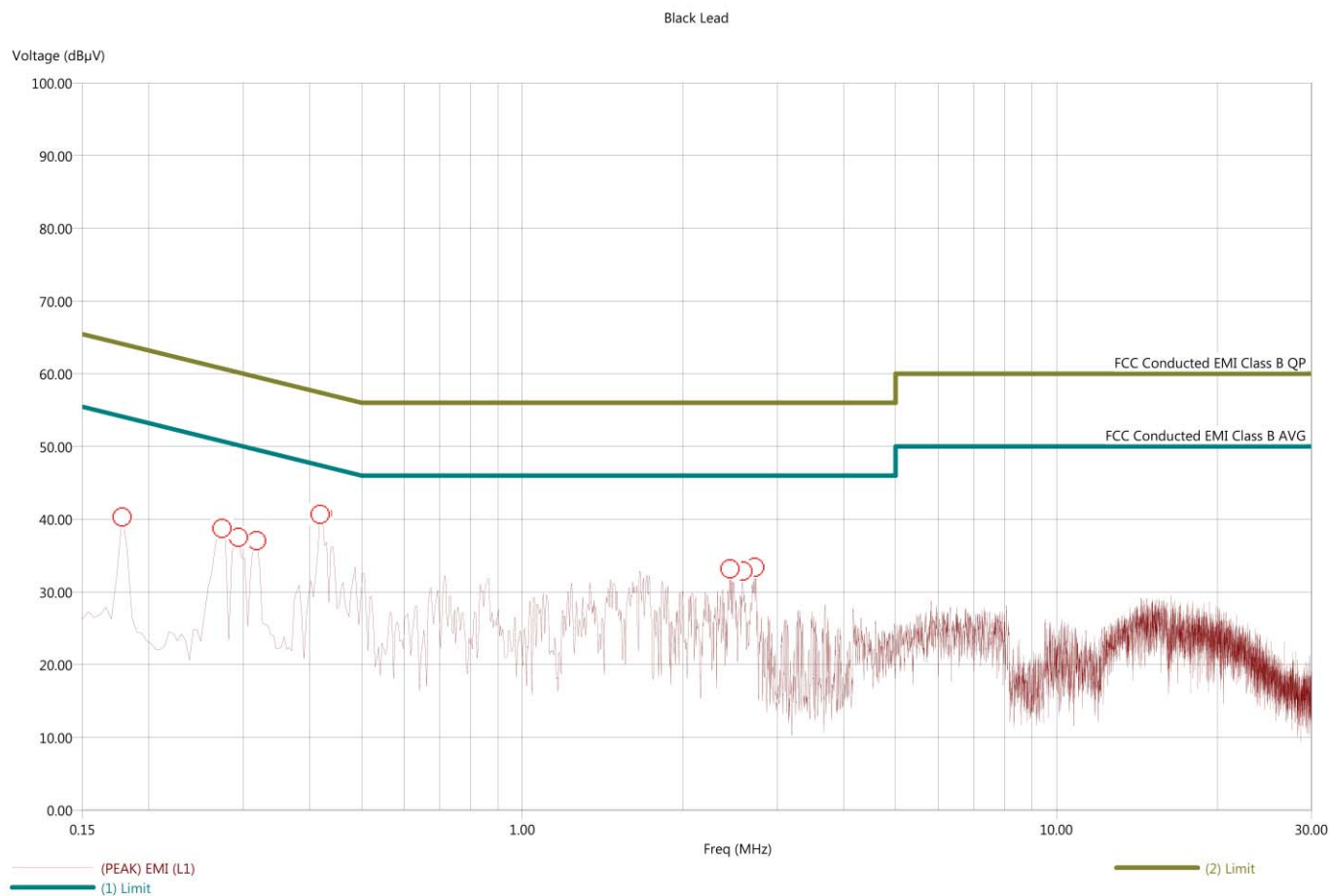
2/11/2020 11:36:02 AM
Sequence: Final Measurements

White Lead								
Freq (MHz)	(PEAK) EMI (dBµV)	(AVG) EMI (dBµV)	(PEAK) Margin (AVG) (dB)	(RMS) Margin (dB)	(RMS) Limit (dBµV)	Cable (dB)	Transducer (dB)	Filter (dB)
0.414	45.90	42.61	-11.46	-4.75	47.36	0.02	0.04	10.08
0.418	44.77	33.11	-12.48	-14.14	47.25	0.02	0.04	10.08
0.998	42.92	39.18	-13.08	-6.82	46.00	0.04	0.04	10.10
1.666	42.37	34.87	-13.63	-11.13	46.00	0.07	0.04	10.03
2.334	45.01	34.65	-10.99	-11.35	46.00	0.09	0.04	10.00
3.518	38.63	26.02	-17.37	-19.98	46.00	0.10	0.05	10.00
8.662	44.86	37.50	-15.14	-12.50	50.00	0.18	0.07	10.10
9.330	45.52	37.95	-14.48	-12.05	50.00	0.18	0.07	10.10
9.998	43.30	38.31	-16.70	-11.69	50.00	0.19	0.07	10.10
13.666	44.85	35.05	-15.15	-14.95	50.00	0.22	0.08	10.10
14.990	38.98	34.03	-21.02	-15.97	50.00	0.23	0.08	10.10
15.662	44.52	33.96	-15.48	-16.04	50.00	0.24	0.08	10.10



Title: FCC Class B - Black Lead
 File: Keysight - Pre-Scan - Receiver mode - Black Lead - FCC Class B.set
 Operator: Harvey Samaco
 EUT Type: Z-Wave Siren
 EUT Condition: The EUT was set to continuously receiving at 908.42 MHz in the low channel (Worst case)
 Company: Ecolink Intelligent Technology, Inc.
 P/N: ISZW7-ECO
 Power level -16
 Receiver mode, AC mode

2/11/2020 11:41:10 AM
 Sequence: Preliminary Scan



Title: FCC Class B - Black Lead
File: Keysight - Final Scan - Receiver mode - Black Lead - FCC Class B.set
Operator: Harvey Samaco
EUT Type: Z-wave Siren
EUT Condition: The EUT was set to continuously receiving at 908.42 MHz in the low channel (Worst case)
Company: Ecolink Intelligent Technology, Inc.
P/N: ISZW7-ECO
Power level -16
Receiver mode, AC mode

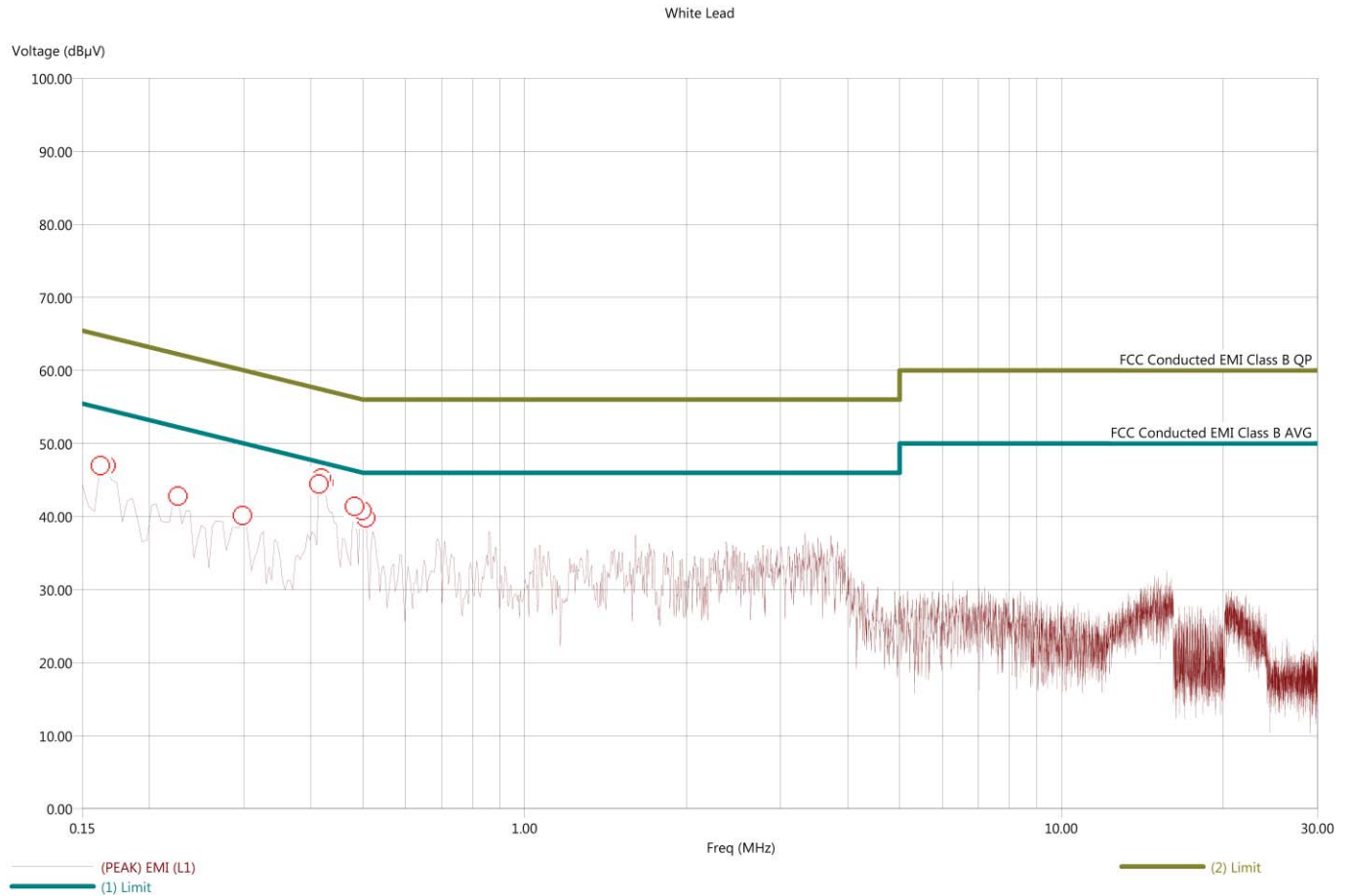
2/11/2020 11:42:40 AM
Sequence: Final Measurements

Black Lead									
Freq (MHz)	(PEAK) EMI (dBµV)	(AVG) EMI (dBµV)	(PEAK) Margin (AVG) (dB)	(RMS) Margin (dB)	(RMS) Limit (dBµV)	Cable (dB)	Transducer (dB)	Filter (dB)	
0.178	45.66	31.82	-18.07	-21.91	53.73	0.02	0.40		10.01
0.274	38.79	29.85	-21.93	-20.87	50.73	0.02	0.23		10.03
0.294	38.89	29.81	-21.36	-20.44	50.26	0.02	0.20		10.04
0.318	37.90	29.21	-21.80	-20.49	49.70	0.02	0.17		10.05
0.418	41.59	38.28	-15.83	-9.14	47.42	0.02	0.12		10.08
0.422	41.95	28.81	-15.27	-18.41	47.22	0.02	0.12		10.08
2.446	36.64	26.25	-19.36	-19.75	46.00	0.09	0.16		10.00
2.586	32.98	24.33	-23.02	-21.67	46.00	0.09	0.16		10.00
2.722	35.82	24.35	-20.18	-21.65	46.00	0.09	0.17		10.00



Title: FCC Class B - White Lead
File: Keysight - Pre-Scan - Receiver mode - White Lead - FCC Class B.set
Operator: Harvey Samaco
EUT Type: Z-Wave Siren
EUT Condition: The EUT was set to continuously receiving at 908.42 MHz in the low channel (Worst case)
Company: Ecolink Intelligent Technology, Inc.
P/N: ISZW7-ECO
Power level -16
Receiver mode, AC mode

2/11/2020 11:44:32 AM
Sequence: Preliminary Scan



Title: FCC Class B - White Lead
File: Keysight - Final Scan - Receiver mode - White Lead - FCC Class B.set
Operator: Harvey Samaco
EUT Type: Z-wave Siren
EUT Condition: The EUT was set to continuously receiving at 908.42 MHz in the low channel (Worst case)
Company: Ecolink Intelligent Technology, Inc.
P/N: ISZW7-ECO
Power level -16
Receiver mode, AC mode

2/11/2020 11:45:48 AM
Sequence: Final Measurements

White Lead								
Freq (MHz)	(PEAK) EMI (dBµV)	(AVG) EMI (dBµV)	(PEAK) Margin (AVG) (dB)	(RMS) Margin (dB)	(RMS) Limit (dBµV)	Cable (dB)	Transducer (dB)	Filter (dB)
0.162	50.99	37.63	-13.55	-16.91	54.54	0.02	0.08	10.02
0.166	48.35	37.67	-16.20	-16.88	54.55	0.02	0.08	10.02
0.226	44.17	33.03	-17.93	-19.07	52.09	0.02	0.05	10.02
0.298	40.20	32.08	-19.92	-18.04	50.12	0.02	0.04	10.04
0.414	43.94	33.60	-13.29	-13.63	47.23	0.02	0.04	10.08
0.418	46.09	37.09	-11.18	-10.18	47.27	0.02	0.04	10.08
0.422	47.89	39.74	-9.41	-7.56	47.30	0.02	0.04	10.08
0.482	42.79	26.76	-13.39	-19.42	46.18	0.02	0.04	10.10
0.498	41.33	25.75	-14.84	-20.42	46.16	0.02	0.04	10.10
0.506	40.48	30.95	-15.55	-15.08	46.02	0.02	0.04	10.10



BAND EDGES

DATA SHEETS

FCC 15.249

Ecolink Intelligent Technology, Inc.
Z-Wave Siren
Part Number: ISZW7-ECO

Date: 2/6/2020
Lab: D
Tested By: Harvey Samaco

Band Edges - AC mode

Power level -16

[illegible]

FCC 15.249

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

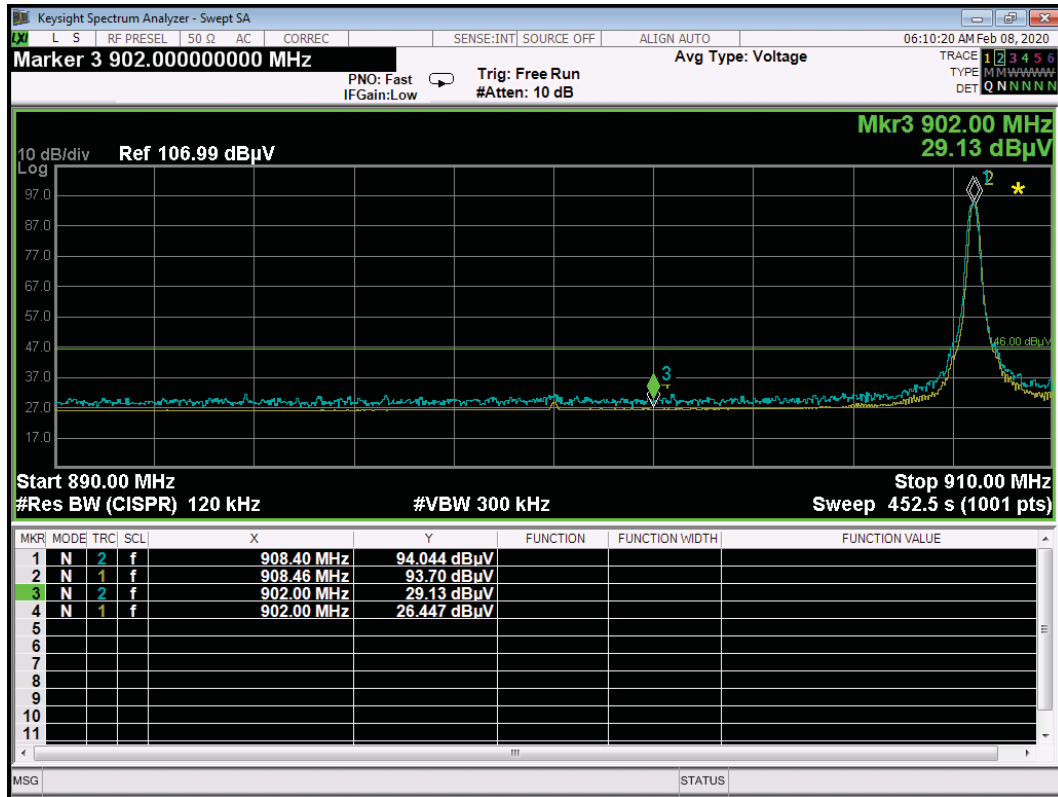
Lab: D

Tested By: Harvey Samaco

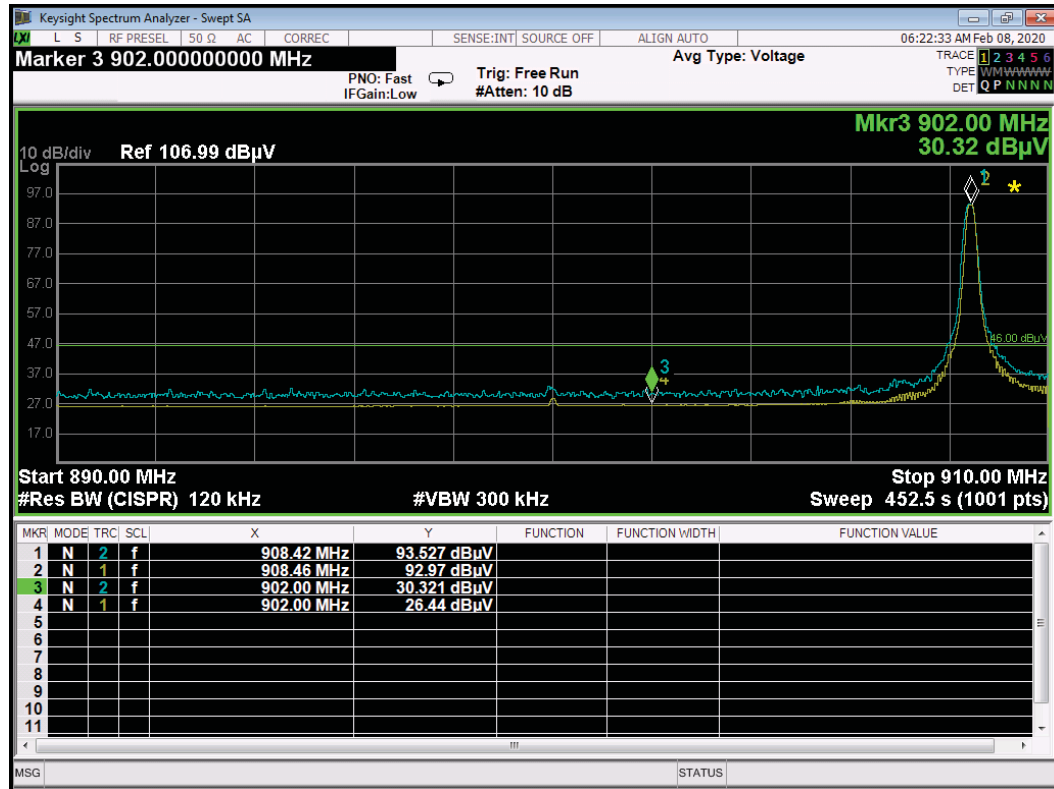
Band Edges - AC mode

Power level -16

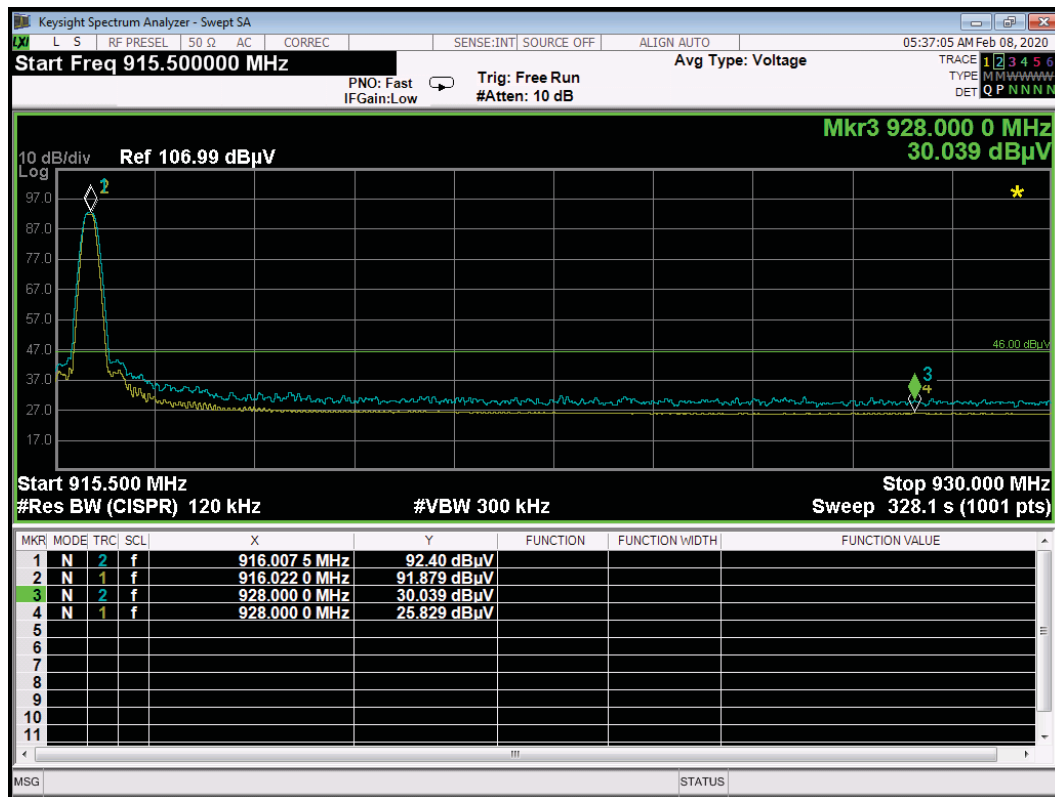
[illegible]



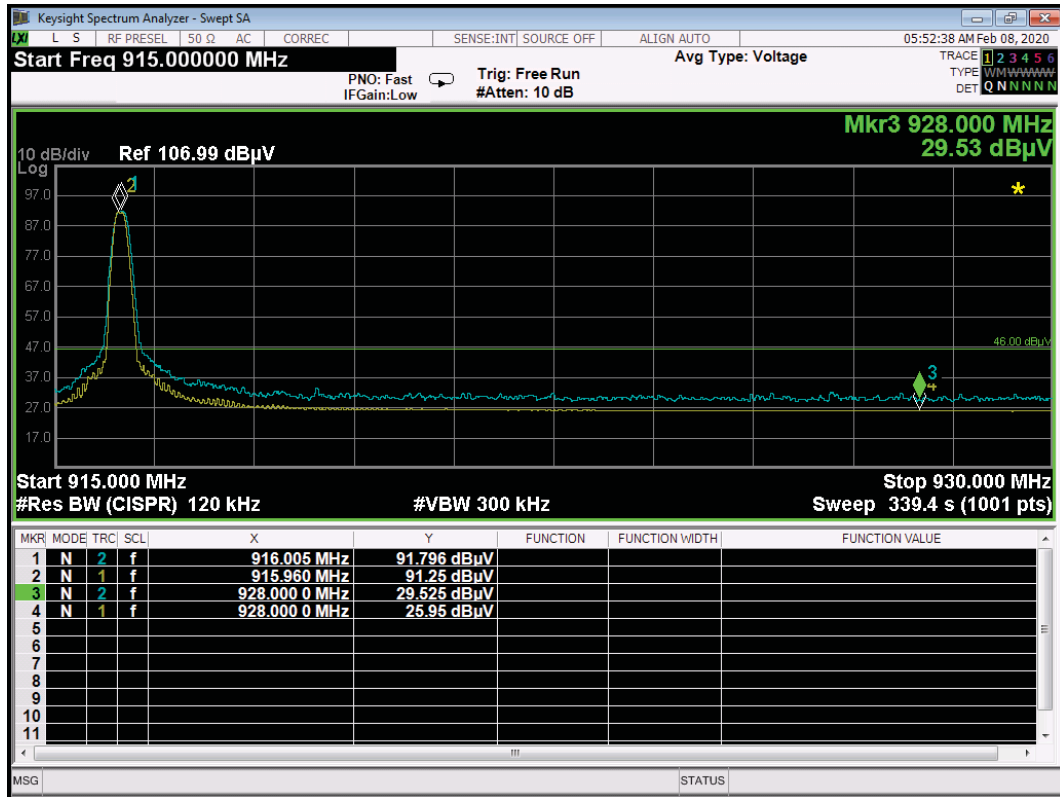
Low Band Edge – AC mode - Horizontal – Z-Axis



Low Band Edge – AC mode - Vertical – X-Axis



High Band Edge – AC mode - Horizontal – Z-Axis



High Band Edge – AC mode - Vertical – Y-Axis

FCC 15.249

Ecolink Intelligent Technology, Inc.
Z-Wave Siren
Part Number: JSZW7-ECO

Date: 2/6/2020
Lab: D
Tested By: Harvey Samaco

Band Edges - Battery mode

Power level -16

[illegible]

FCC 15.249

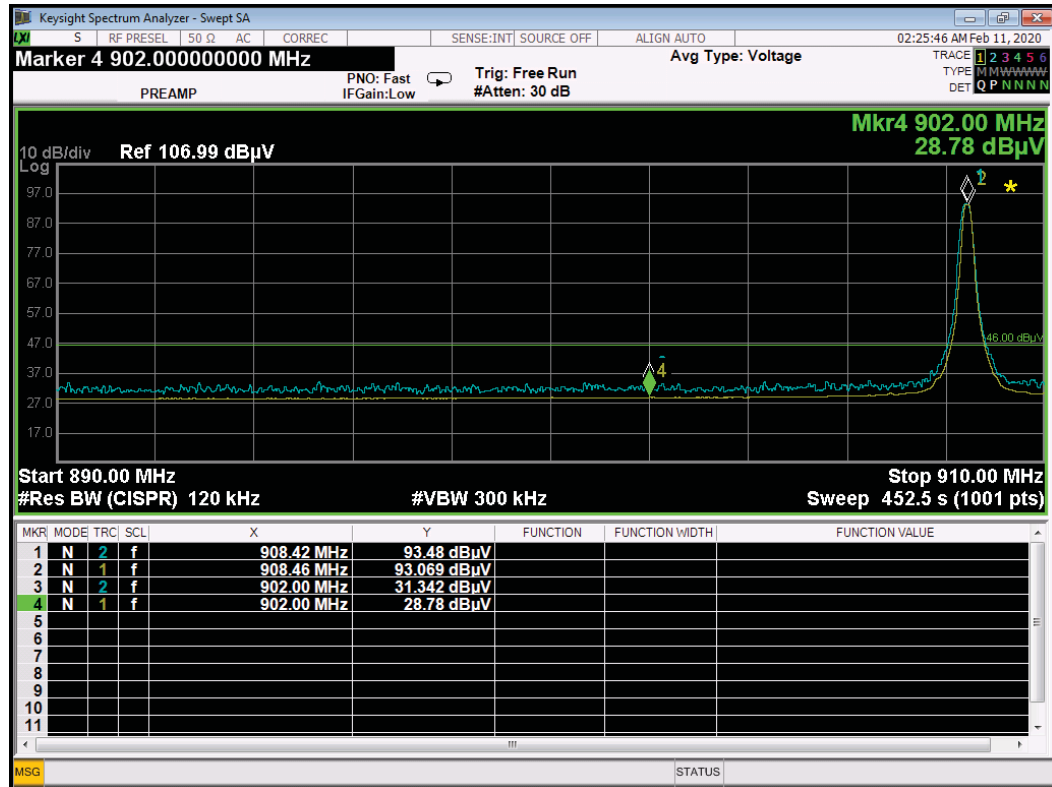
Ecolink Intelligent Technology, Inc.
Z-Wave Siren
Part Number: JSZW7-ECO

Date: 2/6/2020
Lab: D
Tested By: Harvey Samaco

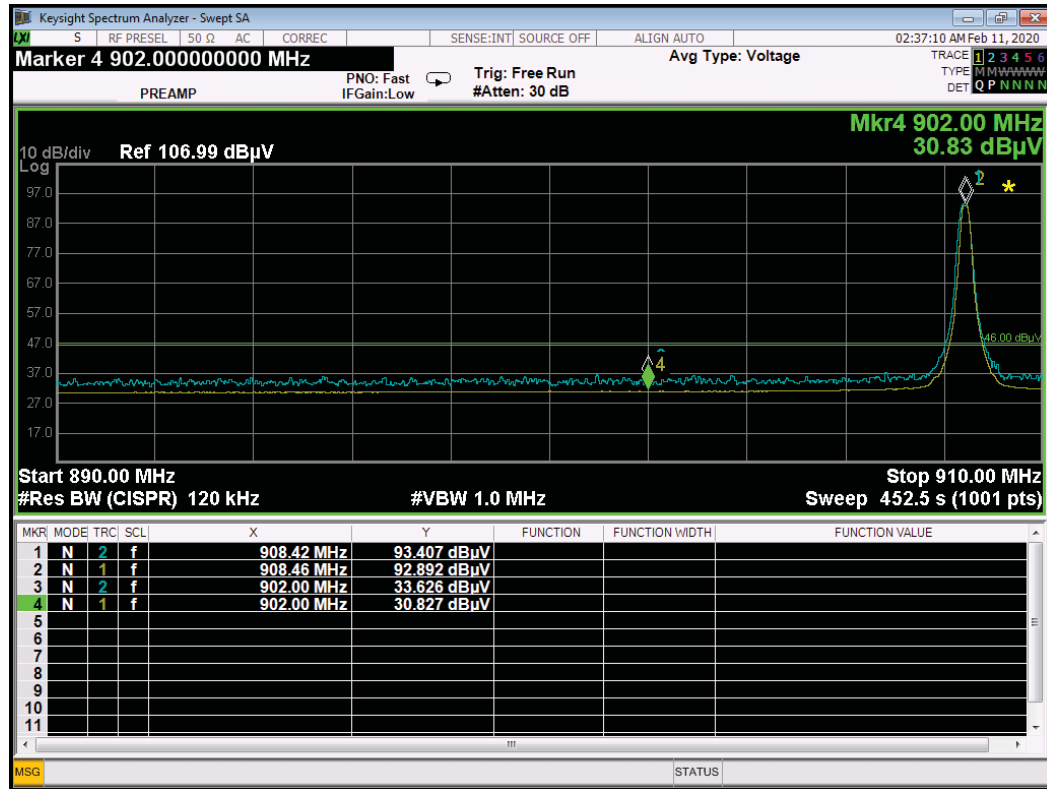
Band Edges - Battery mode

Power level -16

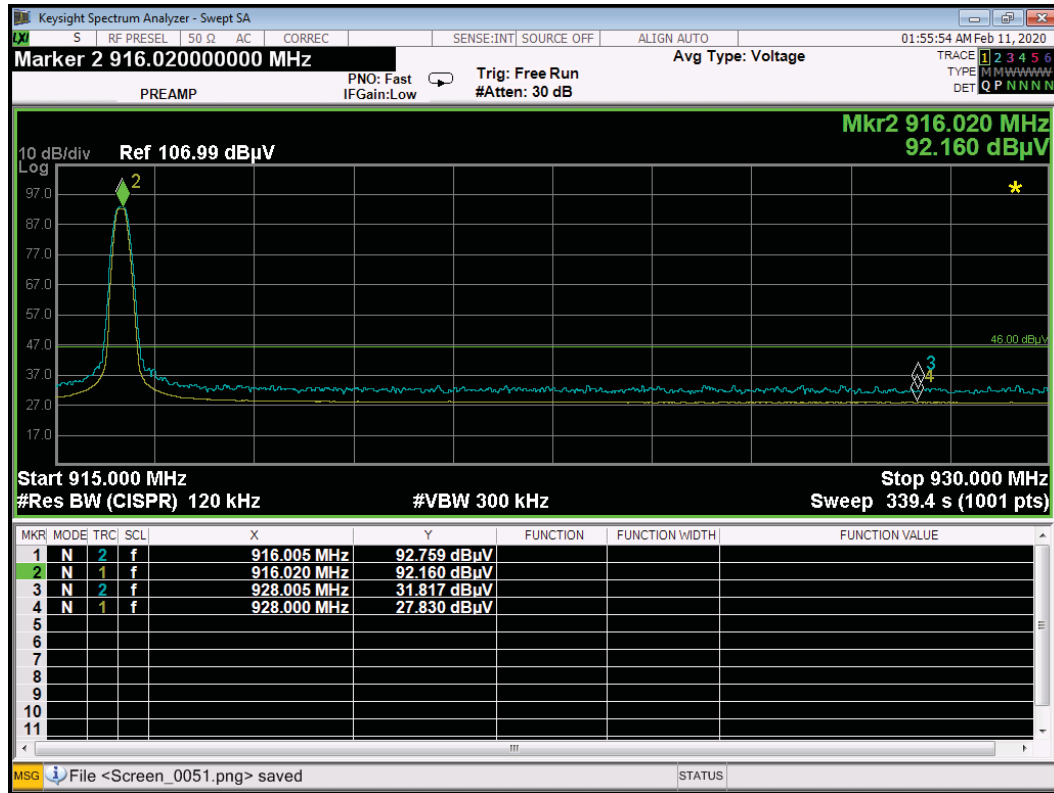
[illegible]



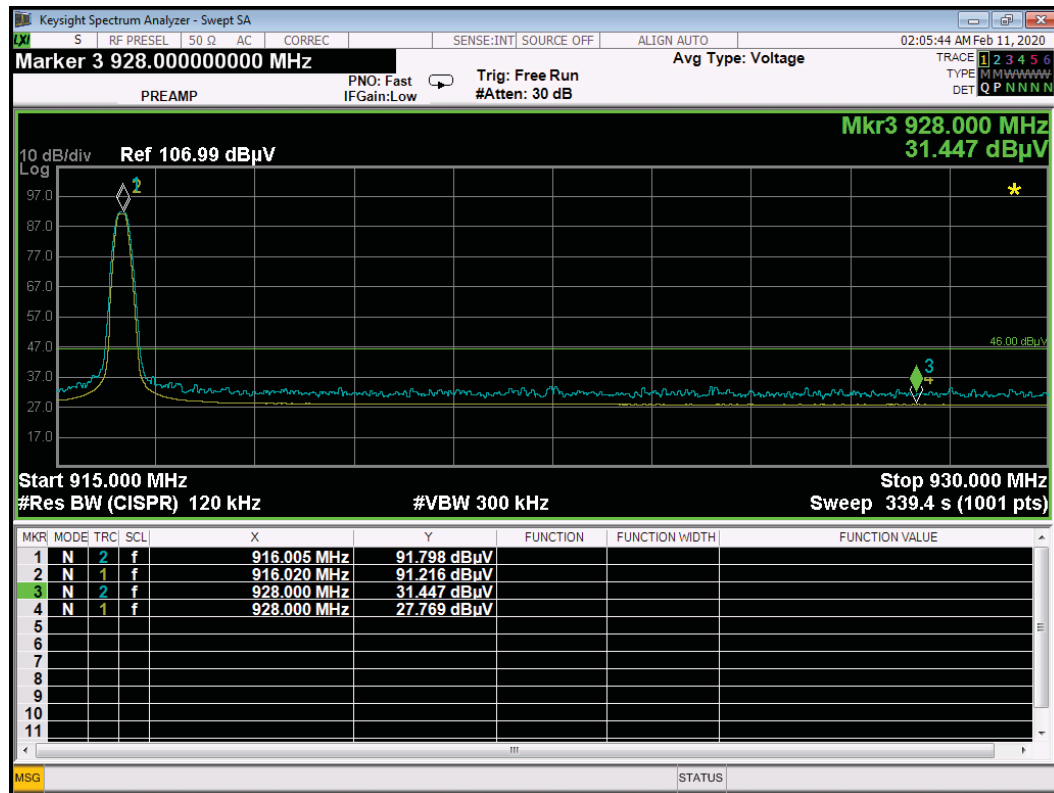
Low Band Edge – Battery mode - Horizontal – Z-Axis



Low Band Edge – Battery mode - Vertical – Y-Axis

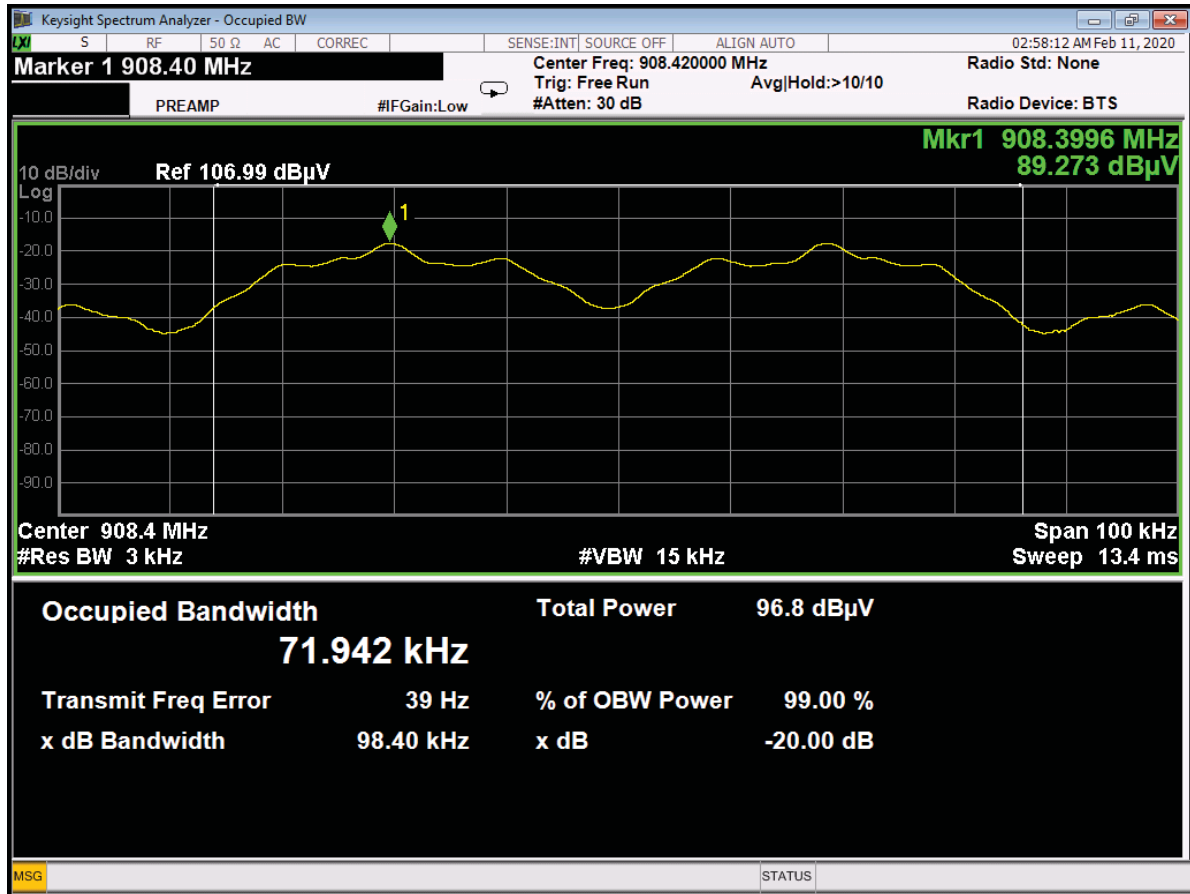


High Band Edge – Battery mode - Horizontal – Z-Axis

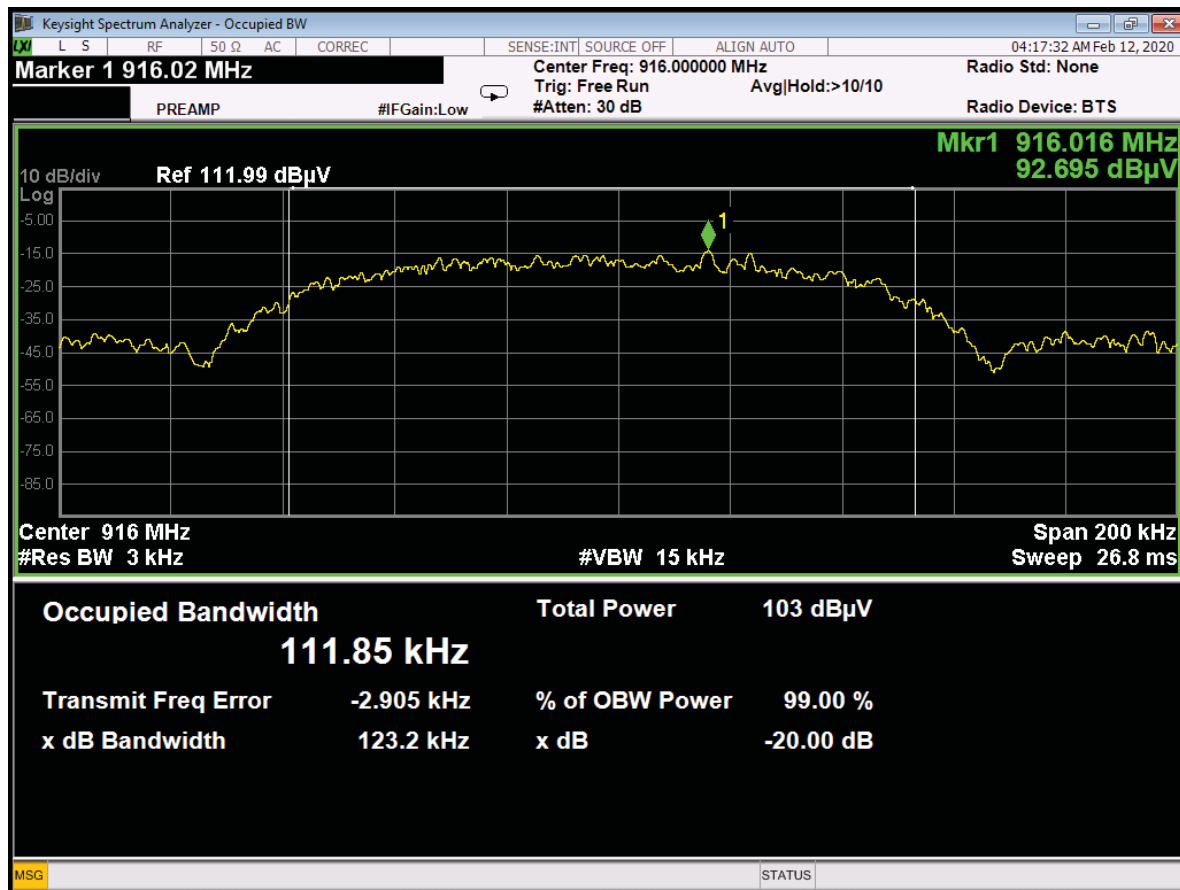


High Band Edge – Battery mode - Vertical – Y-Axis

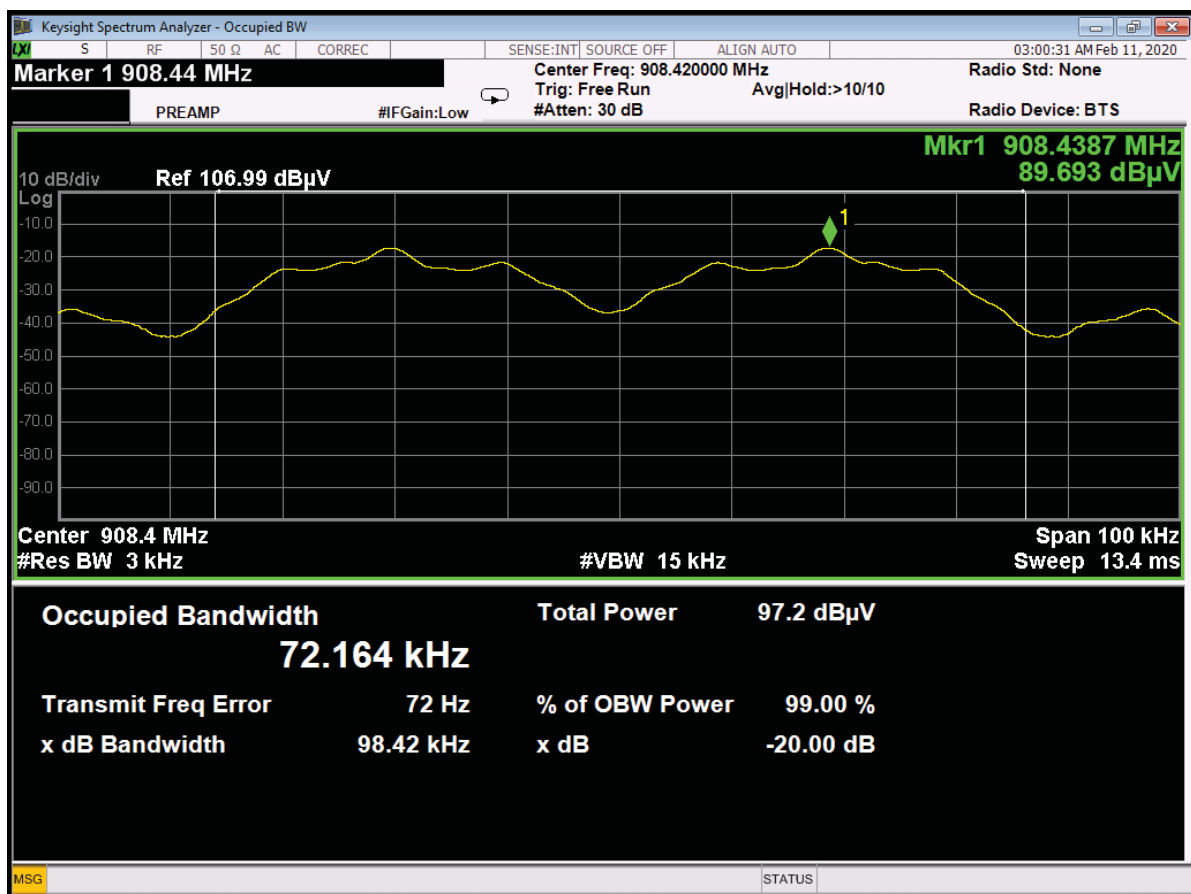
***99 % BANDWIDTH
DATA SHEETS***



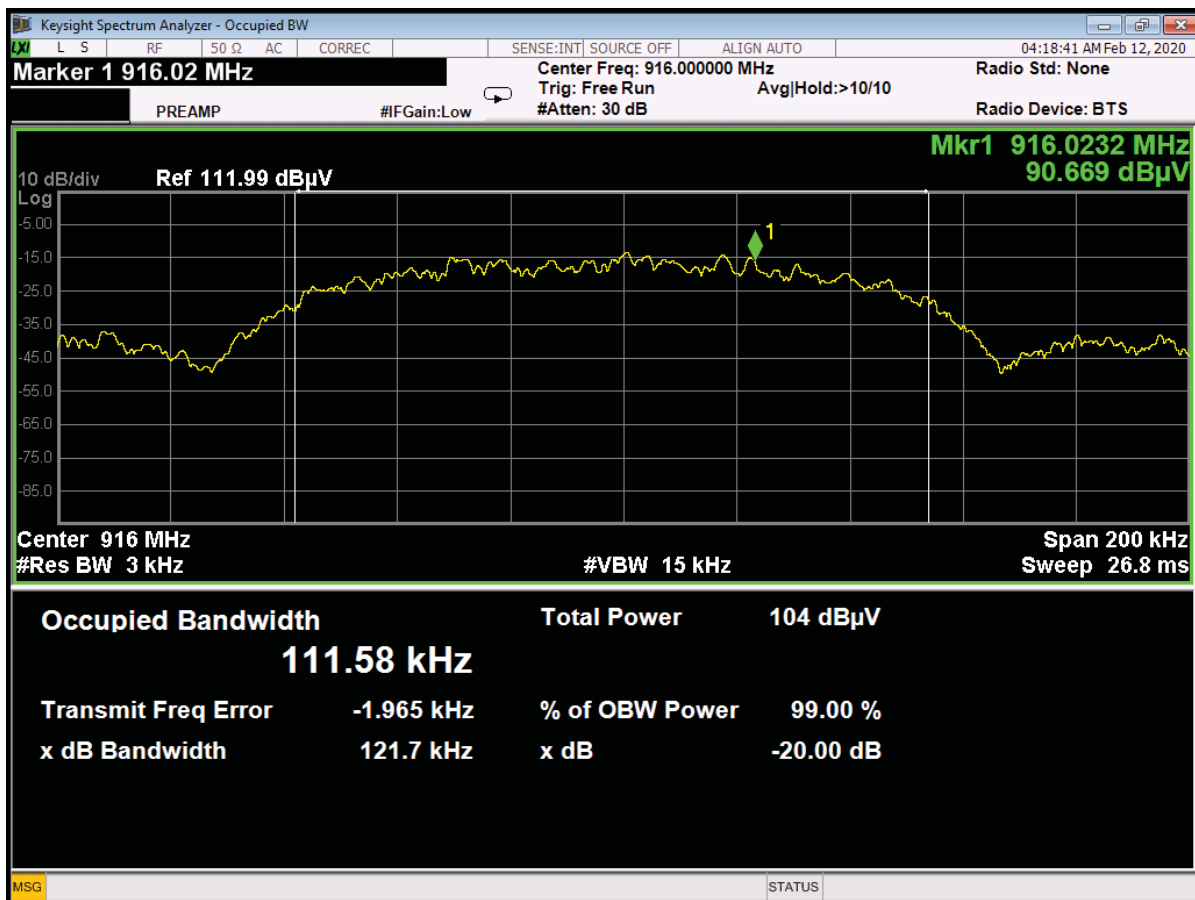
99 Percent BW – 908.42 MHz – AC mode - Low channel – Total Power



99 Percent BW – 916 MHz – AC mode - High channel – Total Power



99 Percent BW – 908.42 MHz – Battery mode - Low channel – Total Power



99 Percent BW – 916 MHz – Battery mode - High channel – Total Power